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TUBERCULOSIS AND WAR*

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The student of history is struck by the fact that disease and pestilence have always been more destructive factors in exterminating human life during war times than all ancient and modern firearms. During previous wars, dysentery, bubonic plague, cholera, typhus, typhoid, smallpox, beriberi, etc., were the main war diseases. Scientific camp sanitation, however, has succeeded in controling most of these pestilences. But now new medical problems have been confronting the army medical services of the nations at war. Among the last may be mentioned trench nephritis, epidemic jaundice, gas poisoning, the soldier's heart, and functional nervous diseases. However, during the present European conflict the most important problem confronting the part of the medical profession charged with the prevention of disease is said to be the prevention of tuberculosis, which is alleged to be menacing the soldier in the field as well as the civil populations of the warring countries.

Our present conception of the pathogenesis and prognosis of tuberculosis shows that this disease may be a factor during war as follows:

1. While examining recruits for the army and navy, the problem arises at once, Should all who show signs of pulmonary disease be rejected?
2. Is active service in the field liable to wake up dormant tuberculous lesions?
3. Are soldiers and sailors excessively exposed to tuberculous infection?
4. What are the effects of war conditions on the incidence of tuberculosis among the civil population?

EXAMINATION OF RECRUITS

It is clear that those who present symptoms and signs of active and progressive tuberculosis will be easily recognized and eliminated. The symptoms of the disease, cough, expectoration of sputum containing tubercle bacilli, fever, tachycardia, emaciation, etc., coupled with unmistakable physical signs, are sufficient in practically all such cases to show that the candidate is unfit for military service entailing great hardships. But there are several classes of persons who are not so clearly differentiated. Among them are to be mentioned: (1) Those showing inconclusive symptoms and signs of lung lesions; (2) those who have been patients in sanatoriums or hospitals for consumptives and were discharged as cured, or with arrested disease; and (3) those having other pulmonary diseases, especially the various forms of bronchitis, asthma, emphysema, etc.

The class of persons commonly known as "suspects" is apt to prove the *bête noire* of the military examiner, just as it has been to physicians in civil practice. Among them are found persons who cough more or less, expectorating sputum which is microscopically negative; they may or may not have lost in weight recently, and perhaps give a history of anorexia, hemoptysis, etc., and state that some physicians have considered them tuberculous, while others disagree. In fact, some will bring proofs that they have been "under observation," or actually patients in tuberculosis clinics for months. On physical examination there may be found some signs suggestive of a localized lesion in one of the lungs — some impairment of resonance, harsh, cogwheel or rude breath sounds, prolonged expiratory murmur, dry, or even moist râles, etc. To reject all presenting these symptoms and signs would be unjust, because it is well known that only a small proportion of them are really tuberculous, while the vast majority are troubled with some nonspecific affections of the upper or lower respiratory passages which are not in the least disabling, and which may in fact be cured when the person is subjected to the regular life in a military camp.

A few points which may prove useful in attempts at differentiation of these cases from those affected with active tuberculous disease are: The examiner will be on safe ground if he relies more on symptoms than on physical signs, or even roentgenography. In other words, it is best to investigate whether or not the person has fever, and if he has not, especially after some exertion, the chances of his being actively tuberculous are remote. The pulse is another excellent indication as to the nature of the affection. Active tuberculous disease with a pulse rate of less than 75 per minute is rather uncommon, and one with a pulse rate of less than 70 is extremely rare. In doubtful cases we must study the stability of the pulse. One suffering from active tuberculosis, even having a slow pulse, shows a pronounced increase in the rate after moderate exertion. It may be stated that a pulse uninfluenced by exertion is an indication that the person examined is not affected with active tuberculous disease.

Changes in resonance and in breath sounds, elicited over a limited area of the chest, if found anywhere below the third rib anteriorly, or the fifth dorsal spine posteriorly, are not of tuberculous origin, provided there are negative findings over the apexes. Distinct signs of catarrhal conditions found over the lower parts of the chest, indicating pathologic changes in

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the bronchi or lungs, unilateral or bilateral, are almost invariably indications of nontuberculous disease, bronchitis, pulmonary emphysema, bronchiectasis, etc., or they may be the result of old and healed pleural adhesions.

Of course, positive sputum is conclusive proof of active tuberculous disease. But in the case of conscription, when the aim is the detection of slackers, it must not be lost sight of that there are many malingerers. The sputum should be collected in the presence of some reliable person. Borrowing sputum containing tubercle bacilli, or even buying it, is not unknown in civil life in New York. There is no question that slackers may resort to this subterfuge.

Those giving a history of having been patients in sanatoriums should not be rejected because of this fact alone. My reasons are the following: A large number have been cured, and participation in active warfare is no more liable to reactivate the tuberculous process than life in a large industrial city, and work in any industry, but few. In fact, experience of medical men in the European armies during the present war has clearly shown that a large proportion of these persons get along very well; as well as other soldiers. In England, Sir William Osler[1] says: "I saw the history sheet of a man who had been for years in attendance at a tuberculosis dispensary with bilateral disease, but he slipped in, stood his training, and was actually sent to France." Dr. Osler is of the opinion that some tuberculous persons may be taken into active field service. In a recent paper, Dr. G. S. Banks[2] speaks of a number of insured tuberculous subjects, formerly in receipt of sanatorium treatment, who have joined the military or naval forces. Of sixty-four such persons, fifty-seven were on military and seven on naval service (mine sweeping):

> Of the total, 58 were suffering from pulmonary disease, and of these 34 had received sanatorium or hospital treatment for various periods. One man actually enlisted while he was a patient in the tuberculosis wards of the City Hospital. Out of the 64 who enlisted, 19 have recently been in active service—14 at the western front and 5 on mine sweepers. Among 6 men discharged from the services, one had enlisted no fewer than three times before being finally discharged, and three had been discharged from one branch of the service and then enlisted in another.

That these soldiers were not affected with the so-called "doubtful" or incipient types of the disease is shown by the fact that:

> Out of 48 pulmonary cases, one was of the first, 12 of the second, and 35 of the third stage (Turban). Twenty of the 43 whose sputum had been examined gave positive results. Of the 14 cases at the western front, of whom 3 were known to have had tubercle bacilli in the sputum, 4 were glandular, 10 pulmonary, and of the 10, 6 were in the second stage and 4 in the third. From the fact that out of the 14 men accepted for foreign service only one had broken down in health, and that only temporarily, the conditions of life in the field are not unfavorable to the maintenance of the general health of the tuberculous patients if the disease is not active or advanced.

Similar experiences have been recorded by French and German physicians. Thus, Lanzenberg[3] insists that we must not reject all recruits presenting auscultatory signs of tuberculosis because of this fact alone:

> The men in the active service and territorials were enlisted without any medical examination, and undoubtedly there were many tuberculous among them. But the number who broke down among them owing to pulmonary diseases has been much smaller than we might anticipate in civil life. Moreover, it is well known that many who were discharged for these causes were malingerers. In general, emaciated individuals have gained in weight and in many cases attained striking and surprising physical development, especially as regards the capacity of the chest, despite the rough conditions of life.

He cites these facts in support of his contentions:

> At the medical service of the Place de Paris, through which hundreds of wounded and convalescent soldiers pass daily, the physicians are often asked to change the services of injured or temporarily incapacitated soldiers, thus having been rendered unfit for the branch of the service to which they belonged. In the vast majority of cases it is a question of transferring men from the infantry to the aviation or automobile corps. These men are subjected to the minutest physical examination. My colleagues and myself in this service have been struck by the frequency with which the examination of the lungs reveals signs considered pathognomonic of tuberculosis. Yet they have been for a year or eighteen months in active service in the field. When they are asked as to how they withstood the hardships of the front, these men, almost always ignorant of the pathologic condition in their lungs, almost invariably answer that they had not been sick up to the day when they were wounded. The interesting part of these facts lies not so much in the great frequency with which they may be observed, as in the conclusion they imply, namely, that the exclusion of all tuberculous patients and suspects would be an unjust measure which might deprive the country of many useful soldiers.

The experiences of the German military medical service have been substantially the same. Goldscheider[4] says that many of the suspects and doubtful cases of tuberculosis of military age have been placed on garrison duty, and most of them have later been found fit for active service. Blömel[5] examined many soldiers who were rejected because of tuberculosis, and found that 80 per cent. were nontuberculous. Many had been patients in sanatoriums, and presented proofs to that effect. He urges that:

> On the whole, the fact that one was at one time an inmate in a tuberculosis sanatorium should not per se be sufficient to free him from military service, because a certain proportion, fluctuating between 8 and 15 per cent. of sanatorium patients, were never *sick* with tuberculosis. Furthermore, patients in the incipient stage of the disease, who make up 50 per cent. of the population in some institutions, manifest strong tendencies to healing of the lesion in the lungs, and one to two years after their discharge they may be considered healthy.

On this point Roepke[6] also agrees. He says that clinically cured tuberculous subjects, who stand the training period well, may be sent to the front. It is understood that the lesion has healed well. Persons with stationary, closed tuberculosis may be utilized for garrison duty. But active, progressive tuberculosis, even in the beginning of the disease, should be a cause for rejection. It is mainly a difference between active and inactive cases.

That sanatorium patients have often made good soldiers has also been found by many French physicians. Burnand[7] says that in France:

1. Osler, William: The Tuberculous Soldier, Lancet, London, 1916, **2**, 220.
2. Banks, G. S.: Lancet, London, 1916, **1**, 323.
3. Lanzenberg, Armand: Des tuberculeux et de leur situation militaire, Paris méd., 1916, **6**, 268.
4. Goldscheider: Ztschr. f. Tuberk., 1915, **25**, 37.
5. Blömel: Die Fehldiagnose Lungentuberkulose bei Beurteilung der Felddiensttauglichkeit, Med. Klin., 1915, **11**, 884.
6. Roepke: Tuberkulose und Krieg, Ztschr. f. Medizinalbeamte, 1915, p. 313.
7. Burnand, R.: Phthisie caséeuse guérie par un pneumothorax, Paris méd., 1916, **6**, 168.

The present war has supplied a large number of examples showing the remarkable resistance of certain consumptives against the hardships of the campaign. Many sanatorium patients, responding to the urgent appeal to their patriotism, escaped from the institutions and went to war during August, 1914. The majority have kept up very well under military life, even better than would be anticipated.

He reports a case of acute progressive tuberculosis treated by artificial pneumothorax, the patient going to the front and doing very well. Rist[8] reports a similar case, the patient reporting from the trenches periodically for refills of the pneumothorax.

German physicians, reporting on the ability of exsanatorium patients to fulfil military duty during war time, believe that they thus prove the immense value of institutional treatment of phthisis. Leschke[9] followed up the records of patients discharged from the sanatorium in Leipzig, and found that 241 were taken into active military service during the first year of the present war. Of these, forty-four were sputum-positive on admission, and ten also on discharge; 187 were considered in the first, forty-eight in the second, and six in the third stages of the disease.

Similar reports are available for the Austro-Hungarian, Russian and Italian armies. Fagiuoli[10] observed many instances in which camp life seems to have given the finishing touch to a treatment started in institutions or at home, and the men, after remaining in the field for some time, are found healthy and free from any signs suggestive of active tuberculosis.

Facts such as these, which can be multiplied considerably, should dissipate our preconceived notions about the fitness of tuberculous patients for work, or for military service. Many who have been treated in sanatoriums may be safely taken into the army; others with latent or even quiescent disease, provided the temperature, pulse, respirations, etc., are around normal, should be given an opportunity to serve their country, if there are no other valid reasons for rejection. Considering that all soldiers are not immediately sent to the front, but must undergo a more or less long period of training, doubtful patients may be sent into the training camp, and if life under military conditions proves harmful, they may then be mustered out. I feel confident that the proportion which will have to be discharged from a selected group of such former tuberculous patients will be comparatively small.

We must bear in mind that a large proportion of patients in sanatoriums for incipient cases, and some even in hospitals for advanced cases, have never been proved tuberculous by the acid test — tubercle bacilli in the sputum; in some institutions over 60 per cent. are sputum-negative on admission. It is an uncontrovertible fact that evidence to the effect that one was a patient in a sanatorium is not conclusive proof that he ever suffered from active tuberculous disease.

A history of a previous attack of pleurisy, dry or with effusion, should not bar one from serving his country during war. While it is true that the vast majority of pleurisies are tuberculous in origin, and a large proportion of these patients develop active phthisis in later years, still not all do develop the disease. If otherwise found healthy, the average person who has passed through an attack of pleurisy is fit for military service. It may incidentally be mentioned that phthisis developing after an attack of pleurisy is usually mild in character, and the prognosis is very good indeed.

A former attack of pneumonia also should not be considered as a cause for rejection, if the patient has recovered and is otherwise healthy. Not only is pneumonia etiologically not at all related to tuberculosis, but one who has survived an attack is no more predisposed to phthisis than the average of the rest of the population.

Chronic bronchitis, pulmonary emphysema, asthma, bronchiectasis, etc., if the heart is found in good condition, and there are no disabling symptoms, such as dyspnea, tachycardia, loss of weight, etc., should also not be considered causes for rejection from military duty. Indeed, the outdoor life, the regular hours, the nourishing food, etc., of modern wars will be beneficial for most of the sufferers from these chronic diseases. This same is true of almost all chronic pathologic processes of the upper respiratory tract.

EFFECT OF ACTIVE SERVICE ON DORMANT TUBERCULOUS DISEASE

The facts just cited would seem to indicate that military service in the field is no more liable to reactivate dormant or quiescent tuberculous lesions than any other civil occupation requiring muscular exertion, walking, exposure to the vicissitudes of the weather, etc. Since we know that the vast majority of tuberculous patients may, and should, return to work as soon as the disease has been brought under control, we cannot say that military duty is in all cases an exception. Modern sanatoriums have of late realized this fact and have shown a tendency to put their patients to "graduated labor," and some even just to work; and the percentage of recoveries is not lower than those attained in institutions in which perfect rest is indiscriminately enjoined, even though it is forgotten that the patients are thus encouraged to remain loafers after their discharge.

One simple way to inquire into the problem is to find out whether or not army and navy life during peace times increases the morbidity and mortality from tuberculosis much above the proportion which might be expected in the male population between 20 and 30 years of age. Of course, it must be borne in mind that during peace the men are carefully selected before admission and weaklings are rejected, while during war many who otherwise could not be enlisted slip in.

It appears that the morbidity and mortality from tuberculosis in the European armies, in which the men are worked quite hard during peace time, has not been excessive, despite the fact that the soldiers and sailors are exposed to many of the factors favoring the development of tuberculosis as we understand at present the etiology of this disease. According to Valery Havard,[11] the death rates in the armies during peace times have been as follows: Great Britain (1909), 0.31; France (1907), 0.76; Prussia and Bavaria (1907), 0.20; Austria (1909), 0.45; Russia (1908), 0.58; Japan (1909), 0.34. In the United States Navy and Marine Corps the death rate averaged 0.58 for the years 1905-1906; for the years 1910-1911 it was 0.33 and 0.59, respectively. For the three years 1909-1911, tuberculosis in our army caused annually 16 per cent. of all the deaths from disease.

8. Rist, E.: Presse méd., 1914, **22**, 692.
9. Leschke, Erich: Die Tuberkulose im Kriege, München. med. Wchnschr., 1915, **62**, 363.
10. Fagiuoli: Tuberculosi in guerra, Gaz. d. osp., 1916, **37**, 438.
11. Havard, Valery: Manual of Military Hygiene, New York, 1914, p. 47.

For all adults from 20 to 29 years (men and women), the nearest class corresponding to the military age, tuberculosis caused 35 per cent. of all deaths (official census).

During war no material increase has been noted in the morbidity and mortality from tuberculosis, as far as historical records go. The present European war also has not shown, so far, any tendency in this direction. Thus Sir William Osler[1] states that:

> Of 1,000,000 enlisted men between the ages of 18 and 40, the proportion to develop tuberculosis is probably much smaller than if these man had remained in civil life . . . . The circumstances of the soldier's life, as a rule, do not weaken but strengthen the body's resistance.

Dr. Osler is quite emphatic on this question; he says:

> I do not think we are to look for a greater increase in the number of cases in the portion of the community which has undertaken military service. We are not going to double our tuberculous population, and are not to expect 70,000 deaths instead of 50,000 annually.

That Osler's prediction was correct is seen from an editorial published as late as Feb. 17, 1917, in the *Lancet*,[12] after the experiences in warfare had extended over two and one half years. Says that writer:

> Camp and trench life has not been productive of more breakdowns than would have occurred in civil employment. It is amazing that in a citizen army running to millions the incidence of breakdown from tuberculosis all told should have been only in the lower thousands. A rough calculation of breakdown from the same cause among the men of military age in industrial occupations would give a vastly higher total.

H. Hyslop Thomson[13] speaks in the same direction, and A. M. Fauntleroy,[14] of the United States Navy, after making careful medical and surgical observations behind the allied armies in France, reports that "tuberculosis of the lungs is of rather infrequent occurrence."

The German experience is not different. Goldscheider[15] says that, as far as he could ascertain from personal observations, the winter campaign at the western front caused an amazingly small number of cases of tuberculosis; other physicians inform him that this has also been their experience. He has not seen a single case of tuberculous infection. In a discussion on the subject before the medical society of Hamburg, Germany, August Predöhl,[16] the historian of tuberculosis, stated that he found that tuberculosis has not increased among the soldiers in active service. Among 5,000 medical and surgical patients treated in the military hospital under his care, only eighteen showed symptoms and signs of active tuberculosis. In another hospital, Rassmann encountered only seventeen tuberculous among 3,000 soldiers. In Russia, Savvin,[17] having under his care 100,000 sick and wounded soldiers in the military hospital of Moscow, found that among 26,524 medical cases, not including those suffering from acute infectious diseases, the following number were affected with various pulmonary diseases of the respiratory tract: laryngitis and tracheitis, 181; bronchitis, 2,153; emphysema, 209; pleurisy, 636; fibrinous pneumonia, 197; catarrhal pneumonia, 411, and pulmonary tuberculosis, 955. Pulmonary tuberculosis was thus found in only 0.96 per cent. of the total number of patients; among those suffering from medical diseases (not from injuries) 3 per cent. were found tuberculous. The author advises that the last figures are in all probability the more correct, because in a surgical clinic tuberculosis is apt to be overlooked. He observed the significant fact that during the first few months of the war tuberculosis was more frequently found than during the later months, which points to the conclusion that many of those who were ill with the disease were ill before they were drafted. On this point most authorities agree. Grau[18] found on careful inquiry that in 39 per cent. of cases of tuberculosis the soldiers have suffered from the disease before they were drafted into the war; similar observations have been recorded by Moritz[19] and others.

How unlikely tuberculosis is to develop in soldiers on active duty is clear when we consider the rarity of surgical tuberculosis in wounded and injured soldiers. We know that tuberculous disease of the bones and joints frequently follows in the wake of injuries in civil life; yet it is extremely rare to find that contusions or wounds acquired in warfare have become tuberculous. On this point all authorities agree, though some cases have been reported during previous wars as well as the present war. Moreover, it was observed during the Franco-Prussian War that gunshot injuries to the lungs only rarely produced pulmonary tuberculosis.[20] Tonnissen[21] found in fifty-six lung injuries no case of tuberculosis; Roepke, Helm[22] and others confirm this from their own observations.

It thus appears that the life in the open air, the good and nourishing diet, the regular hours, and the removal of the deleterious features of city and industrial life of modern times, which the soldier enjoys, are rather of benefit, and outweigh the hardships which go hand in hand with active warfare in the battlefield. At any rate, tuberculosis is no more liable to develop in soldiers than in the civil population. It has also been observed that other diseases of the respiratory tract, such as pneumonia, bronchitis and tonsillitis, and also acute articular rheumatism are not excessively frequent.

EXPOSURE OF SOLDIERS TO TUBERCULOUS INFECTION

The foregoing shows clearly that there is no more danger of tuberculous disease in active army life than in civil life — perhaps even less than in many branches of urban and industrial life of modern times. When considering the problems of tuberculous infection, it must be borne in mind that recent research has clearly shown that the adult human being has almost invariably been infected before he reached adolescence, and that in adults infection hardly ever, if at all, coincides chronologically with the development of disease. Practically all who suffer from tuberculous disease have been infected during childhood, the virus remain-

12. Tuberculosis and the War, Lancet, London, 1917, **1**, 268.
13. Thomson, H. H.: Brit. Jour. Tuberc., 1917, **11**, 44.
14. Fauntleroy, A. M.: Report on the Medicomilitary Aspects of the European War, Washington, Government Printing Office, 1915, p. 55.
15. Goldscheider: Ztschr. f. Tuberk., 1915, **25**, 36.
16. Predöhl, August: Ztschr. f. Tuberk., 1915, **24**, 372.
17. Savvin, V. W.: Russk. Vrach, 1917, **16**, 26.
18. Grau, H.: Krieg und Lungentuberkulose, Ztschr. f. Tuberk., 1915, **24**, 351.
19. Moritz: Ueber Lungentuberkulose im Kriege, Ztschr. f. ärztl. Fortbildung, 1915, **24**, 321.
20. Kriegssanitätsbericht von 1870-71, **3**, 556.
21. Tonnissen: München. med. Wchnschr., 1915, **61**, 89.
22. Helm: Tuberkulose während des Krieges, Ztschr. f. Tuberk., 1915, **24**, 1.

ing dormant for years, until some exciting cause reawakens the bacilli into activity, or reduces the natural resisting forces within the body, and the bacilli are permitted to multiply, producing active or progressive lesions. It appears that over 90 per cent. of civilized humanity have thus been infected, and exogenic reinfection with tubercle bacilli cannot take root. On the other hand, endogenically, by metastasis, dormant lesions may become active and cause more or less serious disease. To be sure, we know at present that privations, exposure to the inclemencies of the weather, injuries, overexertion and like adversities are often instrumental in reactivating the dormant virus, or in reducing the inherent immunity of the body; during warfare these factors are more likely to act than in civil life. But it appears to be the fact that all these adversities have never been instrumental in increasing the tuberculosis morbidity and mortality, as is evidenced by the history of the wars of which we have reliable records, including the present one.

All through history we find enumerated and carefully described the horrors of war, among which medical horrors played no small rôle. In his exhaustive history of the epidemics resulting from wars, Prinzing[23] says:

> Until comparatively recent times, the most serious human cost of war has not been losses from disease in the armies, but losses from epidemics disseminated among the civil populations. It was the war epidemics and their sequelae, rather than direct military losses, that accounted for the deep prostration of Germany after the Thirty Years War. Such epidemics were also of the gravest consequences of the Napoleonic Wars.

It is noteworthy that in the descriptions of the diseases affecting armies in the field in Prinzing's work, as well as in various old and recent books and monographs on military hygiene, hardly any mention is made of tuberculosis as a factor during or after wars. We find details of dysentery, typhus, typhoid fever, smallpox, beriberi, bubonic plague, cholera, etc., and in more recent books, like that of Arthur F. Hurst's,[24] on trench nephritis, epidemic jaundice, gas poisoning, soldier's heart, functional heart disease, etc., but no mention is made of tuberculosis.

It cannot be said that there has been a conspiracy among medicomilitary writers, historians and observers to ignore the factor of tuberculosis in war. There is no doubt that if tuberculosis were actually an appalling war menace it would have been observed and recorded; surely during the Civil War in this country, the Franco-Prussian War of 1870-71, the Russo-Japanese War of 1905 and the first two years of the present war, it would not have been overlooked. I therefore believe that I am safe in concluding that tuberculosis is not more likely to occur in soldiers during active warfare than in civil life.

That the cases occurring in the armies are not necessarily due to infections in the barracks and trenches has been proved in another way. Osler[1] puts it tersely when he says that "in the majority of cases the germ enlists with the soldier." Mönckenberg[25] performed necropsies on eighty-five soldiers, and found tuberculous lesions in twenty-seven, or 31.76 per cent. In only five cases could tuberculosis be considered the cause of death, while in the rest it was only an incidental finding. He considered tuberculous only those lesions which showed caseous and calcareous changes of the lungs, pleura or thoracic glands, while scars of the lungs or pleura, even when localized in an apex, were not counted. Had he counted the latter changes, because they are undoubtedly tuberculous, he would have found over 90 per cent. of tuberculosis, as has been recorded by others. Schroeder,[26] from observations of German soldiers during the present war, emphasizes that exposure to tubercle bacilli plays no significant rôle in the causation of active tuberculosis in the German army. He has not seen a case of primary tuberculosis acquired in the campaign. The same has been recorded for the English and Russian armies, as has already been mentioned.

EFFECTS OF WAR CONDITIONS ON THE INCIDENCE OF TUBERCULOSIS AMONG THE CIVIL POPULATION

Viewing the problem from any angle, it appears that we cannot look for any change in the tuberculosis morbidity and mortality among the civil population because of the war. The hardships to be sustained by the dependents whose breadwinners will be drafted into the army will undoubtedly be significant from an economic standpoint; the increased cost of living will increase these hardships. But as far as can be ascertained among the European belligerent nations at present, it appears that the morbidity and mortality from tuberculosis has not increased during the past two years. As already mentioned, no previous war has increased the tuberculosis morbidity and mortality. As has been shown by Reiche,[27] in Hamburg, where excellent vital statistics have been kept, no increase in the tuberculosis mortality occurred during and after the Franco-Prussian War of 1870-1871. The same was true in the United States after the Civil War.

It appears, however, that in France there have lately been issued urgent appeals for funds to help the *invalides blessés par la tuberculose* — wounded by tuberculosis — as L. Landouzy[28] has called them. From a careful inquiry into the facts as presented in the appeal, it seems that while there are many thousands of soldiers who had to be mustered out because of tuberculous disease, the proportion is not higher than could be expected among men engaged in industrial pursuits. For instance, it has been shown that there are about 100,000 tuberculous ex-soldiers in France at present. This number is undoubtedly appalling. But when we consider that there have been about 6,000,000 or perhaps more soldiers engaged in this war fighting for France, the percentage is no higher than could be expected under any circumstances among people living under modern conditions. The urgent call for the control of tuberculosis was not heeded in France before the war with the same energy as it was in other countries, as England, Germany and the United States. Now that the invalided soldiers who valiantly fought for their country need relief, the French begin to feel that something must be done.

Indeed, figures published by Rénon[29] show clearly that tuberculosis has not increased among the civil population of France since the war began. The tuber-

23. Prinzing, Friedrich: Epidemics Resulting from Wars, Oxford, 1916.
24. Hurst, A. F.: Medical Diseases of the War, London, 1917.
25. Mönckenberg: Tuberkulosebefunde bei Obduktionen von Kombattanten, Ztschr. f. Tuberk., 1915, **24**, 33.
26. Schroeder, S.: Betrachtungen über die Tuberkulose zur Zeit des Krieges, Ztschr. f. Tuberk., 1915, **24**, 337.
27. Reiche: Ztschr. f. Tuberk., 1915, **24**, 372.
28. Landouzy: Le guerre et la tuberculose, Paris méd., 1916, **6**, 59.
29. Renon, Louis: La défense sociale contre la tuberculose pendant la guerre, Paris méd., 1916, **6**, 64.

culosis mortality rates, despite the lack and excessive cost of food, have apparently not changed. "The war has had no effect at all, judging by vital statistics, hospital and private practice," as Rénon puts it. There is no reason to believe that conditions in this country will be different.

RECAPITULATION

The medical history of wars shows that the incidence of tuberculosis among soldiers and noncombatants has not been more excessive than could be expected normally among persons of military age. The morbidity and mortality from this disease have not increased during and after former wars. It is not to be expected, therefore, that during the present war the number incapacitated by tuberculosis among the nations at war should increase. In fact, available evidence, published by those who, because of their exceptional opportunities for observation of soldiers in the field, are competent to express an opinion on the subject, shows clearly that tuberculosis has not changed the rates of morbidity and mortality in England, France, Germany, Italy, Russia and other countries. The large number of tuberculous men among the veterans is only absolute; when considered in relation to the large number of the men engaged in the battlefield, the proportion is quite small.

In evaluating the fitness for military service, examiners should not reject persons because of history of past attacks of tuberculosis, or of having been patients in sanatoriums. A substantial proportion of sanatorium patients have never been sick with phthisis; a larger proportion have been affected with the abortive form of the disease and have completely recovered; and many who had suffered from the chronic forms of phthisis recover to such an extent as to be considered completely cured and fit for any task, including military service. Only symptoms of active disease, especially fever, tachycardia, dyspnea, emaciation, excessive cough and expectoration should be considered causes for rejection. The experiences of military physicians and others in the field in Europe have demonstrated that many soldiers who had suffered from tuberculosis before the onset of the war have made brave and good warriers, and have returned from the field healthier than when they enlisted for service. Nor has it been observed that active military duty is more liable to reactivate latent or dormant tuberculous processes; many affected with quiescent disease have done well.

The problem of tuberculous infection of soldiers need not be considered seriously. Despite the large number of tuberculous soldiers in the European armies, those entitled to an opinion have not seen cases of tuberculous infection acquired while serving during the present war. The reason is known at present: Most adults have been infected with tubercle bacilli during childhood, and have thus been immunized against exogenic reinfection with the same virus, and they are just as safe in the army as in civil life. In the vast majority of tuberculous cases discovered among the soldiers, it was ascertained that they had been affected with the disease before enlistment. Reactivation of old, dormant lesions occurs in civil life; it is doubtful whether it is more likely to occur in military life.

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THE CONTINUOUS BATH IN MENTAL DISEASE *

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The value of the prolonged neutral bath for producing quiet and sleep in certain nervous conditions, hysteria, mild excitements and anxiety states has long been recognized. Brierre de Boismont in France, and Scholz in Germany employed a modified continuous bath for excited patients many years before Kraepelin's observations and emphatic approval brought this method into more or less general use. More than seventy years ago Dr. Isaac Ray visited the important hospitals for the insane in Great Britain, France and Germany, and the following reference is gleaned from his tour notes. "Nothing seems to be so much relied on, especially in France, for subduing inordinate excitement, as the warm bath protracted for an hour or two." [1]

About twenty years ago, Kraepelin noticed that confused, restless and debilitated patients were greatly benefited by several hours spent in a warm bath. He gradually increased the treatment time to an entire day, and finally the unsatisfactory condition of his excited patients during the untreated or night period led him to attempt the experiment of a really continuous or *Dauer-bad*. Patients are now frequently kept in the baths for weeks, or even months, without any untoward results.[2]

THE CONTINUOUS BATH ROOM

The chief requisites for the treatment room are ample space, sufficient light and air, and mechanical facilities for the shutting off of sound communication with the outside world. There are in the Pennsylvania Hospital for the Insane two large sunny bath rooms, each containing three extra size tubs, and equipped with heavy plate glass double windows and doors, and ventilating devices. With the doors and windows closed, the rooms are practically sound proof. The temperature of the water is controlled from a temperature table, and the nurse, who is in constant attendance, takes half hour readings from an ordinary bath thermometer. The patients are clothed in a loose fitting, one piece garment, permitting great freedom of movement. There is an observation window facing the the hall through which every part of the bath room can be readily be seen. An electric button enables the attending nurse to signal for assistance in case of emergency.

The continuous bath room of the future will probably be developed along somewhat more esthetic lines. Since certain patients are under treatment for many hours, days and sometimes weeks, the room must necessarily be used not only as a bath, but also as a living apartment. The introduction of books, magazines, a few games and puzzles, and possibly a picture or two on the walls, will perhaps help to modify its rather monotonous appearance. There is also a distinct need for more individual bath rooms, in which certain types of patients, who are either annoying to others or themselves easily disturbed, may be placed under treat-

* Based on a contribution by the author to Dr. J. Hendrie Lloyd's article, "The Modern Treatment of Insanity," in Musser and Kelly: Practical Treatment, Volume IV.

1. Ray, Isaac: Observations on the Principal Hospitals for the Insane in Great Britain, France and Germany, Am. Jour. Insan., April, 1846.

2. When the time of the bath is protracted beyond the usual period, but does not exceed two hours, it is generally spoken of as "prolonged." When it occupies more than two hours it is referred to as "continuous."

ment. Partial segregation may be accomplished by the use of screens.

PHYSIOLOGIC EFFECT OF THE CONTINUOUS BATH

The effect of the *Dauer-bad* on the physiologic processes of the human economy is but little understood. Our own observations of the body temperature, pulse rate and respirations, recorded over a period of six months, showed practically no variations from the normal. The blood pressure is not essentially influenced. There is some experimental and considerable empiric evidence to prove that the continuous bath acts as a mild hypnotic agent, and that unlike drugs, it induces physiologic fatigue without the sacrifice of mental capacity. Busch and Plant[3] tested a series of normal persons in a prolonged bath, lasting two hours and given at a temperature of 35 C. (95 F.). There was no decline of physical endurance or of mental functioning, although a general feeling of tiredness was produced, extending over a period of several hours. Adler[4] demonstrated an average reduction of 750,000 red cells in the blood count. As all his patients presented a polyerythrocythemia associated with cyanosis, which was markedly improved by the ten hour bath, a redistribution of the surface circulation is suggested. It is extremely likely that the excretory function of the skin and kidneys is stimulated. This is an exceedingly important consideration, as a large percentage of patients, for at least a week following admission, present problems principally of checked secretional activity.

EFFECT OF THE CONTINUOUS BATH ON STATES OF MENTAL EXCITEMENT[5]

The estimate of just how much any isolated therapeutic measure contributes toward recovery from such a complex pathologic condition as is presented by insanity must of course be purely speculative. It would be unfair and incorrect to say that the continuous baths cure or even definitely shorten the course of any psychosis. That they constitute an extremely valuable and efficient method of controlling excited states cannot be denied. Probably the best results were obtained in conditions of confusion and restlessness, frequently associated with considerable physical debilitation. The infective-exhaustive group furnishes a good illustration of this type. After five or six hours in the tubs the majority of such patients became quiet and drowsy, and often fell into a sound slumber shortly after being placed in bed. Some clinicians advocate sleeping in the tubs; we feel that when a somnolent state is reached, transference of the patient to bed is desirable.

Abnormal mental exhaustion is closely simulated by extreme bodily fatigue, and while in the latter, Nature readily supplies the sovereign remedy, namely, sleep, in the former it must be produced by some artificial method, as the pathologic condition of the nerve system precludes the possibility of a normal response to physical weariness. Hypnotic drugs given in doses sufficiently large to be effectual are chiefly objectionable because they place an additional burden on the already overtaxed excretory system. Moist packs are unsatisfactory principally on account of the resistance they offer to the motor restlessness, which is such a frequent accompaniment of the apprehensive, confusional state. On the other hand, the continuous bath relies for its therapeutic value solely on water, a nonresistant medium which favors rather than retards excretion, and whose action approximates the physiologic steps between the production and onset of normal fatigue and sleep, in that it is gradual and sedative rather than rapid and hypnotic.

The manic phase of manic-depressive insanity responds to the continuous bath in something more than half of all cases. With some observers the experience has been that the excitement is allayed only during the treatment time, and then continues as before. In frank mania the brain is in some sense comparable to a highly sensitized receptive plate, which is receiving an endless flow of stimuli from the environment, through the route of the special senses, and is attempting to react to them in terms of psychomotor and vocomotor activity. Just what percentage of the sensory stimulations are referable to the tactile sense, and what proportion of the latter finally finds expression in ideas and spoken words and movement, is of course a matter of pure conjecture. It seems reasonable, however, to say that the continuous bath, at least, reduces the sum total of accidental and other surface contacts to a fairly low level. It dispenses with the irritation arising from constricting clothing and surrounds the body of the patient with water, a medium whose physical characteristics, especially the temperature, can be artificially maintained at a constant and uniform degree. Thus a nonirritating sheath is interposed between a large area of the skin surface and touch-contact with the environment. Wholly apart from the possibility of a directly favorable therapeutic result is the important consideration that in the baths the destructive tendencies of maniacal patients are checked, and the distressing untidiness becomes a much less serious factor in the management of the case.

In dementia praecox the baths were employed mainly for the relief of the episodic excitements of the catatonic form, in which they were moderately successful, and to combat various vasomotor disturbances in which their effect was highly beneficial. Not only was cyanosis improved, as Adler demonstrated, but the tendency to coldness and sweating of the extremities, oiliness and coarsening of the skin texture, and in one case, marked dermographia, were all much lessened. In paresis the baths are valuable not only in controlling the disturbed periods, but also in maintaining an active, healthy condition of the skin, which especially in the late stages of the disease is prone to trophic degenerations. The most unfavorable cases for tub treatment are the apprehensive, agitated states which occur in the involutional and presenile depressions and the senile dementias. Gross[6] found that apprehension dictated by delusions was made worse. Although the *Dauer-bad* is probably the best and most rational method of controlling excited mental states, yet it should never be regarded as a specific remedy. It may possibly have some effect in shortening the course of restless, confusional states of infective-exhaustive origin, but here again too many factors are operative, and an accurate estimate of each remedial measure is clearly impossible.

3. Busch and Plant: Allgemeine Therapie der Psychosen von A. Gross, in Aschaffenburg's Handbuch der Psychiatrie, Part 4, p. 144.

4. Adler, H. M., and Ragle, E. H.: Note on the Influence of Hydrotherapy on the Red Blood Cell Count in the Insane, Contributions from the Psychopathic Hospital, 1913, p. 67.

5. Based on observations covering a period of three years, during which time about 300 patients, exhibiting various kinds and degrees of mental excitement, were treated in the continuous bath.

6. Gross, A.: Allgemeine Therapie der Psychosen, Aschaffenburg's Handbuch der Psychiatrie, Part 4, p. 148.

ADVANTAGES OF THE CONTINUOUS BATHS

The selection of a method for the control of the excitement factor in both acute and chronic mental disease is practically limited to the employment of hypnotic drugs or the use of various hydrotherapeutic agencies. When we consider that the disturbed periods are a matter not merely of hours or days, but of weeks or more often months, the principal objection to drug restraint at once becomes manifest. In every field of medicine it is now a clearly established principle that resort to hypnotic drugs is purely a temporary measure, and that unless the condition under treatment is both hopeless and chronic, their continued use must be regarded as both dangerous and unscientific.

Of the remaining hydrotherapeutic possibilities, exclusive of the continuous tubs, the hot and cold moist packs are perhaps most representative. They have two rather serious objections, in that the temperature cannot be definitely controlled, and even more important, they include the element of mechanical restraint. In the majority of cases, continuous tub treatment is easily the method of choice. It requires less preparation and may be continued for longer periods of time. The temperature of the water may be readily varied and can always be ascertained to the exact degree. The body is effectively cleansed, an important consideration in untidy patients. A wide range of motor activity is permitted under the best conditions, which probably contributes materially to the production of normal fatigue and sleep. No restraint is necessary, and to use it is to defeat the purpose for which the bath is given. If mechanical means are required to keep a patient in the tubs resort would better be had to some other form of treatment. Furthermore, as no device, however carefully tested, can be regarded as perfect in its operation, there is always the danger of an inflow of dangerously hot water to be considered. An unfortunate instance in which the patient was scalded to death, probably because she was mechanically prevented from leaving the tubs, has recently been reported.[7]

UNTOWARD EFFECTS AND CONTRAINDICATIONS TO CONTINUOUS TUB TREATMENT

The untoward effects of bath treatment in properly selected cases were practically nil. At times there were fleeting vasomotor disturbances usually manifesting themselves as deep flushings of the face and chest. They disappeared after a short time and apparently had no especial significance. Occasionally we have noted ephemeral rashes and skin exfoliation. Anointing the body with lanolin has been advised. Gross[8] observed an epidemic of furunculosis among the patients using the same bath room, which abated only after the use of the room was discontinued. We have had several cases of discharging ear, usually a canal furunculosis, following the baths, and are now trying the plan of plugging the ears with cotton saturated with liquid petrolatum. Probably thorough drying of the ears is the most important prophylactic measure. Kraepelin regards any existing ear disease as a contraindication. Most clinicians interdict the baths during the menstrual period. After the menses have been well established, however, there seems to be no good reason why a greatly excited patient should not be given moderate tub treatment. Advanced cardiac and pulmonary disease constitute prohibiting conditions, but even markedly arteriosclerotic patients have not shown any ill effects.

A PLEA FOR THE WIDER USE OF BATH TREATMENT

Perhaps the fact that the continuous baths were first employed in mental disease and have found their most general application in this field has led to their neglect in the treatment of certain other conditions, which although not generally classed as insanity, nevertheless present similar problems. Patients with delirium tremens, for instance, are generally referred to the general hospital, where the method in vogue is usually mechanical restraint plus hypnotic and stimulating drug therapy. Alcoholic delirium is essentially a toxic psychosis in which the psychomotor excitement, although more intense, does not differ materially in its characteristics from that of the deliriums of certain fevers, of high grade infective-exhaustive states and of so-called "delirious" mania. There is, in all, the same imperative need of rapid and free elimination to reduce the toxicity and sleep to prevent exhaustion. Hypnotic drugs not only are frequently ineffective, but if they are to succeed at all, must be given in large and dangerous doses. At the Boston Psychopathic Hospital,[9] ten unselected patients with delirium tremens were treated in the continuous tubs with the addition of moist packs and eliminatory measures, without a single fatality. Fifty cases selected at random in series of ten from five general hospitals, in which the method used consisted of mechanical restraint, hypnotic and stimulating drugs, showed a mortality of 26 per cent. In this connection it may be remarked that in several instances we have found the prolonged bath a valuable adjunct to the Lambert-Towne treatment in helping to combat the marked restlessness, which commonly makes its appearance on the second day.

On the family physician, who generally first sees the acute mental case, devolves the exceedingly difficult problem of caring for the patient during the longer or shorter interval which precedes admission to the hospital. Certain of the objective manifestations of acute insanity, insomnia, motor restlessness and vocal activity appeal to the laity in the light of fundamental disorders of the mind, and there is a naive but insistent clamor for an immediate exhibition of the magic hypodermic, which will soothe the troubled spirit and produce sleep. The physician cannot well avoid the moderate employment of hypnotic drugs, but he can limit their use by resorting to other measures. A prolonged and even a continuous bath can be safely given in an ordinary bath tub, provided an efficient nurse is in attendance. Mental disease in itself is serious enough without the addition of a complicating drug toxemia.

A few cases of "postoperative mania" suggest that continuous tub treatment is frequently a practical method of caring for the surgical patient who develops acute mental symptoms. If there is actual danger of mechanical violence to the wound, the principle of nonrestraint may have to be sacrificed as the lesser of two evils. The active, untidy surgical and mental patient is under infinitely better conditions in the bath,

7. White, William: Dangers of the Continuous Bath, Am. Jour. Insan., January, 1916, p. 481.

8. Gross, A.: Allgemeine Therapie der Psychosen, Aschaffenburg's Handbuch der Psychiatrie, Part 4, p. 146.

9. Gregg, Donald: The Treatment of Deliria in General Hospitals and in Hospitals for the Insane, Contributions from the Psychopathic Hospital, 1913, p. 65.

in which comparative asepsis can be maintained without great difficulty, than when confined to a room in which even the most diligent care cannot prevent a septic environment. The bath has been repeatedly recommended for the decubitus which is often a serious feature of the late stages of paresis. I have seen an obstinate ulcer of the foot on which the usual medication, and even repeated scarification, made no impression yield readily to a continuous bath of physiologic sodium chlorid solution.

Perhaps the principal disadvantage of the baths is their cost, both as to installation and operation. Furthermore, the intensive nursing required is a matter of considerable expense. Careful and intelligent care, before, during and after the bath, is the only certain method of avoiding accident and of realizing the fullest possible value of the treatment. Probably if the amount saved under the conditions of the bath, in caring for the untidy and destructive patient, could be computed, the importance of these factors would be materially lessened.

CONCLUSION

It seems conservative to assert that the continuous bath is the most satisfactory method we have of treating the fairly large group of excited states which are encountered in many of the psychoses.

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DEVELOPMENTS IN THE PARAFFIN TREATMENT OF BURNS AND OTHER OPEN WOUNDS *

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Further experience in the laboratory and reports of clinical applications are showing pretty clearly that some of the current endeavors in the paraffin treatment of burns are proceeding in directions that are not likely to lead to improvements; they have also indicated the directions in which further experimentation is desirable, and have already led to certain improvements that appear of sufficient practical importance. All of these considerations may justify the publication of this note.

PHYSICAL CRITERIA

The important qualities of paraffin for burns, as mentioned in my previous paper,[1] and in that of Leech[2] are the properties of pliability, ductility, low degree melting point, hardness and adhesion. I should be inclined to rate the importance of these properties in the order given; but all the properties must be within certain limits.

I have devised methods for testing these properties. These were described in the paper of Leech. They do not entirely eliminate the personal factor; but they are sufficiently quantitative for practical purposes, and are so simple that they can be easily applied. The factor of adhesion has not yet been measured quantitatively, but is probably of slight practical importance.

The Addition of Other Waxes, Etc., to Paraffin.—In my previous paper, I expressed the opinion that simple paraffin would accomplish everything that could be accomplished by any of the mixtures, and that the most promising direction for improvement would be in the choice of the paraffin itself, rather than in additions. Further experience has established the correctness of these predictions. There has now been considerable experience with simple paraffin, and with various mixtures.[3] This has shown that they are clinically indistinguishable. A review of my own data on the effect of other waxes added to paraffin shows that the essential properties were not improved by such additions, except that asphalt does make the waxes a little more adherent.[4]

The addition of rosin, which is advised in so many of the published formulas (evidently because of the misleading statements concerning the composition of "Ambrine"), is distinctly detrimental. The rosin appears insoluble in paraffin, and therefore never makes a good mixture. The addition of oils lowers the melting point, but practically destroys the ductility and pliability.

The effects of the various additions are deduced from my first pages as follows:

Asphalts sometimes improve pliability and ductility and lower melting point.

Naval pitch improves pliability, not ductility, and raises the melting point.

Rosin raises the melting point and diminishes ductility, but has no effect on pliability.

Beeswax, spermaceti, stearic acid, linseed oil, Venice turpentine, olive oil, castor oil, theobroma and Japan wax raise the melting point, and diminishes ductility and pliability.

Petrolatum diminishes pliability and ductility, but makes no change in the melting point.

Liquid petrolatum[5] lowers the melting point and diminishes ductility and pliability.

PHYSICAL IMPROVEMENTS IN PARAFFIN

The paper of Dr. Leech shows that several refineries produce paraffins that surpass greatly for these properties the ordinary pharmacopeial paraffin. A glance at his paper shows those brands that are most useful. I am of the opinion that paraffins intended for the treatment of burns, etc., should comply with certain specifications as follows:

Paraffin for Films.—Paraffin for use on burns, etc., should be solid, but more ductile and pliable than the official paraffin, and have a rather lower melting point. When intended especially for this purpose, it should be liquid at or below 50 C.; a thin film, when prepared and tested by the methods described in the paper of Dr. Leech, should be pliable at 28 C., and ductile at 31 C.

I would recommend that in future only paraffins complying with these specifications be used in the treatment of burns. A number of these are enumerated in Leech's paper, and apparently there is no difficulty in refineries producing other brands should they be desired. I believe that these should have the preference over the more complicated and rather inferior mixtures, whether these are proprietary preparations or published formulas, unless a definite advantage can be shown for the latter. As I have previously said,

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* From the Pharmacological Laboratory of the Western Reserve University, School of Medicine.

1. Sollmann, Torald: Suggested Formulas for Paraffin Films, THE JOURNAL A. M. A., April 7, 1917, p. 1037.
2. Leech, P. N.: "Ambrine" and Paraffin Films, THE JOURNAL A. M. A., May 19, 1917, p. 1497.
3. The clinical applications were made by Dr. J. R. Beiter of Canton, Ohio, who expects to report his observations in more detail.
4. Dr. Leech and I have both noticed that the addition of even traces of asphalt to paraffin greatly lowers its surface tension, so that when the melted mixture is poured on warm water it forms a thin, even film, whereas simple paraffin tends to collect into rather thick drops.
5. The brand of liquid petrolatum used throughout these experiments was "Stanolind Liquid Paraffin."

all the experience I have gathered goes against any such advantages, and I consider experimentation along that line as entirely unpromising. For cosmetic purposes, it may be advantageous to give a flesh tint to the paraffin, by the addition of a trace of scarlet red or sudan.

ADDITION OF ANTISEPTICS, ETC.

A number of the published formulas contain added antiseptics, such as resorcin; betanaphthol; epithelial stimulants like sudan red; and aromatic oils like eucalyptol. The last is added confessedly as a mere perfume, and doubtless performs that purpose to some degree. The others — the antiseptics and stimulants — must be absolutely useless. Solid paraffin is used familiarly as a hermetic seal for chemicals. It has been found perfectly successful for that purpose, and it does not lose its efficiency when the substance is incorporated with it. In other words, the film of solid paraffin encloses the added antiseptic, etc., tightly and nearly as hermetically as if it were inclosed in a rubber bag. Only an infinitesimally thin layer at the very surface can diffuse into the wound.

I have shown this by adding resorcin or phenol to melted paraffin, and pouring this in films of about 2 to 3 mm. thickness. The films were then immersed in water.

With resorcin, 0.2 per cent., in paraffin:[6] (0.2 per cent. in paraffin, 2 parts, liquid petrolatum, 1 part), after five days the water contained no trace of resorcin.

With 1 per cent. phenol (carbolic acid) in paraffin: In two and a half hours there was a very faint trace, which did not increase in five days. The wax when melted with water showed an abundance of phenol.

LIQUID-SOLID PARAFFIN SEQUENCE

Perhaps the greatest difficulty in the use of the paraffin treatment is in the application of the first coat of the melted paraffin. This is apt to be painful if the paraffin is at all overheated — and this is often difficult to avoid in practice. The use of a brush with melted paraffin is apt to be somewhat painful, and spraying apparatus for melted paraffin are not very satisfactory.

We have found that these disadvantages can be avoided by applying for the first coat liquid petrolatum in place of the melted paraffin.

Otherwise, the application is quite as usual: The cotton film is laid on the liquid petrolatum; then the melted paraffin is painted over the cotton, etc.[7]

Clinically, this method is highly satisfactory. The liquid petrolatum is entirely painless, and protects the wound against excessive heat from the melted paraffin. The liquid petrolatum could be easily applied with an ordinary oil atomizer. However, this is not at all necessary, a thin layer being easily applied with a cotton swab. Dr. Beiter expresses himself as especially enthusiastic over this modification.

Use of Antiseptics, etc., with Liquid Petrolatum.—The use of the liquid petrolatum for the first coat has the further advantage that it promises the effective application of anesthetics, antiseptics or stimulants to the wound. These would simply be dissolved in the liquid petrolatum (or if insoluble in this, in olive oil). I have not yet given this method a clinical trial, but have worked out a series of solutions which are very promising. These will be enumerated in the next section, so that they may be tried more extensively, and in this way any improvements in the treatment of burns may be hastened. It is scarcely necessary to call attention to the fact that under the present circumstances prompt improvements in these directions would be especially desirable.

COMPARISON WITH OTHER METHODS OF TREATMENT

Almost all surgeons who have had occasion to employ the paraffin treatment express themselves with various degrees of enthusiasm as to its advantages over the older methods of treatment. However, no exact comparisons have been published, so that it is difficult to say how much, if any, of the present enthusiasm is due to novelty. It would be desirable that actual comparisons be made between these methods, by those who have the opportunity and sufficient interest. Such experiments are already being started by several workers; but their value is likely to be proportional to the number of workers engaged; again, especially because early results are particularly valuable.

I subjoin a list of comparisons that seem to me especially desirable:

I would suggest either plain paraffin, or the liquid-solid paraffin sequence as a standard of comparison. This would be applied, together with the methods to be compared, to adjacent or centralateral areas. If applied to adjacent areas, the wound should be divided by imaginary lines into zones about 2 inches wide (oriented by marking the skin outside of the wound). It is important that the methods applied to the same patient should not be so numerous as to interfere with the practicality of the application. If it is at all possible, photographs should be taken.

LINE 1.—*Local Anesthetics.*—This appears one of the most promising improvements. I would suggest that the following be tried out, generally dissolved in liquid petrolatum, and applied by the liquid-solid sequence:

Chloretone, from 1:200 to 1:1,000 (soluble in about 200 parts of liquid petrolatum).
Orthoform-New, a 1 per cent. suspension made by dissolving the orthoform in a little alcohol and shaking with olive oil. The orthoform is but little soluble in either liquid petrolatum or olive oil.
Camphor, from 1:100 to 1:20 (it is completely soluble in 20 parts of liquid petrolatum; incompletely in 10 parts).
Menthol, 1:10 (completely soluble).

LINE 2.—*Antiseptics and Epithelial Agents.*—These may have a field, especially in the later stages, or with slowly healing ulcers. I would suggest the following:

Eucalyptus oil, 2 per cent. (completely soluble).
Resorcin, 1 per cent. in olive oil (nearly insoluble in liquid petrolatum).
Betanaphthol, 1:400, dissolved in a little alcohol and shaken with liquid petrolatum (it is nearly insoluble in liquid petrolatum).
Gentian violet, 1:5,000 suspension (dissolved in a little alcohol and shaken with the liquid petrolatum; it is nearly insoluble in liquid petrolatum).
Scarlet red, 0.5 per cent. suspension in liquid petrolatum (only slightly soluble).

LINE 3.—*Comparison of Paraffin with Astringents and Washes.*—This and the following represent comparisons of the new with the older methods, to arrive at a definite judgment of their relative advantages:

Picric acid, saturated solution.
Solution of aluminum acetate, N. F., diluted ten times.
Boric acid, 2 per cent.
Sodium bicarbonate, 2 per cent.
Lime water.
Magnesium sulphate, 5 per cent.
Potassium sulphate, 1 per cent.
Tincture of myrrh, diluted with 8 parts of water.

6. In these experiments, the "Parowax" brand of paraffin was used.
7. It would probably be a considerable convenience if manufacturers of absorbent cotton would market for this purpose rolls consisting of single layers, of the proper thickness, and about 6 inches wide.

LINE 4.—*Comparison of Wax Treatment with Other Fatty Methods.*—

Petrolatum, applied on gauze.
Fisher-gauze and cotton.
Liquid petrolatum gauze and cotton.
Carron oil on cotton: Cotton film, paraffin and cotton.
As the preceding, sesame oil being used in place of linseed oil, in making the lime liniment.

LINE 5.—*Comparison of the Waxes.*—While present experience does not incline me to attach much importance to modifications of the paraffin by the addition of other waxes, any one interested in this phase of the subject may find the following most promising:

Paraffin.[8]
Paraffin with Texas asphalt, 1 per cent.
Paraffin with spermaceti, 10 per cent., or paraffin-stearic acid, ten per cent.
Paraffin with theobroma, 10 per cent.
Paraffin with liquid petrolatum, 10 per cent. (paraffin 90, liquid petrolatum[8] 10).
Paraffin with liquid petrolatum, 33 per cent. (paraffin 67, liquid petrolatum[8] 33).
Formula published by Leech:

Paraffin (M. P. by U. S. P. method 47.2 C.).....97.5 gm.
Asphalt varnish .....from 3 to 5 drops
Olive oil .....1.5 c.c.

CONCLUSIONS

Several refineries prepare paraffins of low melting point that are superior in their physical properties to any of the mixtures on the market.

The addition to paraffin of waxes, resins, etc., as also of antiseptics, etc., is superfluous.

Further improvements are not to be sought along these lines.

The difficulties of the paraffin method are greatly reduced by employing liquid petrolatum instead of melted paraffin for the first coat. Further improvements may be attempted by the addition of antiseptics, stimulants, and especially anesthetics to the liquid petrolatum of the first coat.

Systematic comparison of these improved methods with the older methods is desirable.

PARAFFIN IN THE TREATMENT OF WOUNDS AND BURNS

OBSERVATIONS ON VARIOUS PREPARATIONS

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The successes claimed for "Ambrine" in the treatment of burns promised a large field in industrial accidents and therefore prompted extensive trials. Owing to my inability to obtain "Ambrine," various paraffin compounds were used — formulas containing eucalyptus, resorcin, betanaphthol, resin, cera flava, olive oil, and scarlet red, in ordinary paraffin. My series of cases represents over 4,000 wax dressings on every conceivable burn, and many lacerated wounds.

Prior to the employment of the wax treatment of burns we had employed the usual methods — various ointments, various aqueous solutions, the bath treatment, exposure to the air, and picric acid.

Our technic in the use of waxes was as follows: All burns were carefully cleaned at our emergency hospital by well trained men, any blebs were opened, and all the skin that could be taken off with ease was removed. The burned area was dried either by exposure to air or by gently wiping the surface with cotton pledgets dipped in ether. Over the involved area a thin film of the wax was painted. (The wax is kept constantly in a water bath, so that it is at all times ready for instant use.) Over the wax film a thin layer of cotton or a split piece of sheet wadding was placed and a second film of wax was painted, sealing it to the skin at the edges of the cotton dressing. Over this a heavier cotton dressing was applied and then the bandage. We found that if the injured surface was wet or damp the first paraffin film would not adhere.

We began with the various paraffin mixtures enumerated above; but we failed to see any differences, except some disagreeable features with the resin mixtures. For example, the undissolved resin sank to the bottom of our warming receptacle and injured the brush with which the wax was applied, making the application to the injured surface painful. We therefore discarded all drugs in our wax and used the commercial "Parowax," applied as above. This was sometimes tinted pink with scarlet red simply for cosmetic reasons.

The question of melting point was at first an important one, because to apply a hot solution to a large area of denuded nerve endings usually brought a prompt and energetic reaction, and to wait until the wax cooled to the extent that a film formed over it meant that it would cool below the liquid state before it could be applied. However, the water bath or household double boiler holds the melting point very well.

A suggestion made to me by Dr. Torald Sollmann has eliminated the importance of melting point temperature entirely, and greatly simplified the dressing as well as adding to the comfort of the patient at the time of the dressing, and in no way changing the results. His suggestion was that the wound be painted with liquid petrolatum, further treatment proceeding as with the wax. In this method a layer of liquid petrolatum and then the cotton or sheet wadding are placed over the injured area before the warm paraffin is painted on the dressing. This method has been followed in all of our recent cases and is greatly appreciated by the patients, who are the court of last appeal. It is essential that the dressing adhere at least to the skin about the edges of the dressing; otherwise the secretions are pouring out over the intact skin and excoriating it, soiling the dressings and making a disagreeable odor.

ADVANTAGES OF THE WAX TREATMENT OF BURNS

1. It is an inexpensive dressing; a pound of wax and a pint of liquid petrolatum, together costing about 65 cents, will dress many burns. It replaces the gauze which at this time is quite expensive.

2. It is a comfortable dressing because it is firm and smooth, and the granulating surface does not grow through it as with the gauze. The paraffin is hard enough to make the dressing somewhat rigid and acts as a splint.

3. It is a cleaner dressing than any I have used because the wound discharge is not permitted to soak through the impermeable wax covering, soiling all the linen that comes in contact with the patient. As the secretions are sealed up, there is no noticeable odor about the patient, which was a disagreeable factor with former methods of treating these injuries.

8. For these experiments "Parowax" could be used. This brand of paraffin, however, melts a little higher than 50 C. It would seem, therefore, that the more suitable grades of paraffin, such as are described in the recent report of the Association's chemical laboratory should be employed in the preparation of these mixtures.

4. Superficial burns heal more readily under the wax treatment than with any other method with which I am familiar. This is due to but one fact: Under former methods of application of solutions and oily substances, no matter what their kind, the granulations penetrated the meshes of the dressing in contact with the wound, and on removal at redressings, these granulations were destroyed, regardless of the care with which the dressing was done or the method employed in the removal of the dressings in contact with the wound. The paraffin film method does not adhere to the injured area, and therefore does not injure the granulation tissue and the epithelium that is attempting to cover in the denuded area. Early in the course of the burn, if it is an extensive one, the entire sealed surface of the dressing will be filled with fluid so that it is merely lifted off. Later, as the wound heals, the secretion diminishes, and the granulations begin to grow, the epithelial islands appear as white points at the site of hair follicles, and from these islands the epithelization takes place rapidly because the epithelium is not injured in the dressings and redressings.

5. Deep burns do not repair any more rapidly under this method than any other method. There is no difference in the scars of burns treated by the wax method and any other method. If the true skin is destroyed, the end-result is scar tissue or an ulcer. If scar tissue replaces the destroyed tissue, it performs as does scar tissue that develops under any and all forms of treatment, and as scar tissue has performed since the beginning of time. We have tried treating two sides of a body burned to about the same degree, with the wax method, the solution method, and various other methods, and have been unable to detect any difference in the end-result, as to scar.

6. The wax method is much more comfortable at dressing time than any other method with which I am familiar, for the purely mechanical reason that the granulations do not grow through it, and it is lifted off painlessly. To those who have to do with burned men this means a great deal. The pain endured by the patient as the dressings were removed under previous methods of treating burns left an unpleasant impression to carry with one on the day's rounds.

7. We think there are fewer furuncles on our burned patients since the wax has been used, but nephritis is quite as common.

DISADVANTAGES

1. Some patients refused to be treated with the wax when we were applying the warm wax directly to the injured area, because of the pain. These complaints are no longer heard since the liquid petrolatum has been used for the first coat.

2. Owing to the fact that this method has received so much favorable comment in the lay press, as to negligible scars, perfect comfort on application and other extravagant statements, the man who uses it for the first time will probably be disappointed.

3. This method is a time consumer; it requires more care and patience than do the dressings by other methods.

Winds.—Winds are annoying, uncomfortable and objectionable. Wind is likely to fill the air with dust. It interferes with the satisfactory regulation of the body heat. It robs the body of its heat by conduction, if damp, by evaporation if dry. A wind also requires on the part of the individual physical resistance which is exhausting to all but the robust. —Asst. Surg.-Gen. J. W. Trask, *Public Health Reports.*

XANTHOCHROMIA AND OTHER CHANGES IN THE CEREBROSPINAL FLUID

THEIR FREQUENCY IN CHRONIC SURGICAL SPINAL DISEASES, AND THEIR SIGNIFICANCE *

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This study is based on an analysis of the cerebrospinal fluids of ninety-two patients with chronic spinal diseases who were operated on by one of us (C. A. E.) at the New York Neurological Institute, at Mount Sinai Hospital, and at other institutions.

In all of the patients, the diagnosis, made from the clinical symptoms and signs, was substantiated or corrected by the operative findings and by the examination of material removed at the operation, and in a few cases, at necropsy.

Eighteen different conditions are included among the cases, and are arranged in Table 1 in the order of frequency.

TABLE 1.—CONDITIONS FOUND IN NINETY-TWO PATIENTS

Condition	Number of Cases
Extramedullary tumor	20
Multiple sclerosis	15
Intramedullary tumor	12
Pachymeningitis	9
Meningomyelitis	6
Varicose veins of cord	5
Syringomyelia	5
Tumor of conus and cauda equina	4
Neuritis of cauda equina	4
Old fracture of vertebrae	3
Myelitis	2
Transverse myelitis	1
Tuberculoma of cord	1
Aneurysm of spinal vessels	1
Foreign body (knife blade) in cord	1
Hematomyelia	1
Spondylitis	1
Tuberculous spondylitis	1

In all of the cases the spinal fluid was examined for increased protein or globulin and for its reaction to Fehling's solution, and a cell count and Wassermann test were made. The color of the fluid and the presence or absence of spontaneous clotting were carefully noted.

For the globulin estimation, the butyric acid ammonium sulphate method was used. The larger number of the examinations were made in the laboratory of the New York Neurological Institute by Dr. D. M. Kaplan; some were made in the laboratory of Mount Sinai Hospital by Dr. D. J. Kaliski.

THE FREQUENCY AND SIGNIFICANCE OF XANTHOCHROMIA

A few months ago, Sprunt and Walker[1] made a report on 100 cases of yellow spinal fluids, reports of which they had collected from the literature, and described five cases which they themselves had observed. According to these authors, the yellow spinal fluids may be divided into two main groups:

1. Those in which the color is due to dissolved hemoglobin or its derivatives, and which as a rule do not coagulate spontaneously and contain only a small amount of globulin. Such fluids usually are associated with brain tumors in contact with the meninges or ventricles.

These cases are not considered in this paper.

2. The larger and more important group comprises those cases showing the so-called Froin's syndrome, in which the

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1. Sprunt, T. P., and Walker, J. E.: The Significance of Xanthochromia of the Cerebrospinal Fluid, Bull. Johns Hopkins Hosp., 1917, **28**, 80.

fluid is transparently clear, yellow, coagulates spontaneously, contains large amounts of globulin, may or may not show pleocytosis, and gives no positive tests for hemoglobin.

As we shall show, the complete Froin syndrome was observed in less than one third of our patients with yellow spinal fluids.

Among the cases of chronic disease which form the basis of this paper, there were fourteen with yellow fluid.[2] Ten were cases of extramedullary tumor, two were gummas, one occurred in a patient with varicose veins of the cord, and one in a patient with neuritis of the cauda equina. Including with the cases of extramedullary tumor the two syphilitics, twelve, or 85.7 per cent., of the patients with yellow fluid had spinal cord tumors — a proportion that is higher than in previously reported series of cases.

The color varied from a light canary yellow to a deep chrome. The most deeply colored fluids were observed in the patients with large tumors of the conus and cauda equina, and in a patient with a small growth of the conus and an apparently encapsulated collection of fluid in the lowermost part of the spinal canal.

We have never observed any yellowness in the fluid which was withdrawn by aspiration from the spinal cord itself.

We are not prepared to say that the yellowness is due alone to compression of the cord and stasis of the spinal fluid. If there were no other factors involved, yellow fluids should have been frequently observed in other cases of slowly progressive spinal compression, such as old fractures and intramedullary growths.

Of twenty-four patients with extramedullary spinal tumors, ten, or about 41 per cent., had yellow fluids. It is of interest to note that xanthochromia was not observed in any of the twelve cases of intramedullary growth or in any patient with an extradural neoplasm.[3]

As far as we have been able to determine, yellow fluids are not characteristic of any particular kind of intradural new growth, although, as we have already stated, they regularly occur in the so-called giant tumors of the conus and cauda equina.

In all but one of the patients with yellow fluid, the disease (tumor, ten cases; gumma, two cases; varicose veins of the cord, one case; neuritis of the caudal nerves, one case) was located in the lower dorsal or lumbar regions. In three of the patients the fluid obtained by puncture a few weeks after the removal of the growth was clear and of normal color.

In two patients with extramedullary tumors the spinal fluid gave a positive Wassermann reaction; in only one of these was there a definite syphilitic history. In these patients intensive specific treatment failed to check the rapid advance of the symptoms. At the operation, in each case, there were no evidences of syphilitic involvement of the cord or meninges, but in each a small tumor which proved to be a neurofibroma of the arachnoid was removed.

We have had occasion to observe two additional cases with yellow fluid, both of which had positive Wassermann reactions and typical symptoms of cord compression. These patients were not operated on, as they improved rapidly under active specific treatment, one of them becoming practically well within six weeks.

It is our opinion that in such conditions if extensive specific treatment should fail to give amelioration of the symptoms within a reasonable period, an exploratory laminectomy should be done. We consider this advisable not only because of the possibility of the existence of a nonsyphilitic tumor in a syphilitic patient, but also because a gumma which is not rapidly reduced by specific treatment should be removed by surgical means before the spinal cord has been too badly damaged by it.

SPONTANEOUS COAGULATION

Although spontaneous clotting of the cerebrospinal fluid is often observed in acute spinal diseases, and after recent trauma of the spine with intradural hemorrhage, it is rare in the slowly progressive spinal diseases which may have to be subjected to operative interference. Thus it was observed in only seven of our ninety-two cases, and every one of these patients had an extramedullary new growth. It was encountered in seven of our twenty-four cases of extramedullary tumor (29.2 per cent.). It occurred in every one of the patients with tumors of the conus and cauda equina (four patients, 100 per cent.) in whom fluid was obtained by lumbar puncture.[4]

We have observed spontaneous clotting only in yellow fluid, but in this connection, it is well to remember that the cases of our series were all examples of slowly progressive disease.

INCREASE IN GLOBULIN

The cerebrospinal fluid contained an excess of globulin in fifty-six of the ninety-two patients. All but one of the patients with spinal cord tumors had an excess of globulin in their fluid (thirty-six out of thirty-seven, or 99 per cent.). This increase was found in every one of the extramedullary growths. In fourteen of the twenty-four extramedullary tumors the excess of globulin was well marked, and in three the protein content was so high that spontaneous coagulation occurred.

Increase of globulin occurs as well with tumors within the substance of the spinal cord. Thus the globulin in the cerebrospinal fluid was increased in twelve of thirteen cases of intramedullary tumors, and in four of these patients there was a marked excess.

Excess of globulin is relatively rare in pachymeningitis (33 per cent. of our cases). In six cases of meningomyelitis, only three showed an excess of globulin. This was most surprising, because one would expect that in chronic inflammatory processes of the meninges, the globulin content of the fluid would be regularly increased.

A distinct excess of globulin was observed in three patients with signs of cord compression after an old vertebral fracture, in two patients with swollen cords from toxic myelitis, in cases of transverse myelitis, aneurysm of the posterior spinal vessels, Pott's disease, and in a case of knife blade in the spinal cord.

The globulin was not increased in multiple sclerosis (fifteen cases), in neuritis of the cauda equina (four cases), in a case of hematomyelia, in one of spondylitis, etc. (Table 2).

These results show that an increase of globulin (Phase 1 of Nonne) is found in many organic diseases of the spinal cord, but that a negative globulin test is not infrequently encountered in organic spinal disease.

2. Two of these patients were not subjected to operation.

3. I. Strauss (Proc. Am. Neur. Assn., 1912) has, however, reported a case of spondylitis with bone abscess, in which the fluid was light yellow.

4. In many of the large tumors of the conus and cauda which fill up the lower part of the spinal canal, no fluid can be obtained by lumbar puncture.

THE CELL COUNT

As can be seen by Table 2, the number of cells to each cubic millimeter of the spinal fluid varied within wide limits.

In general, extramedullary tumors, varicose veins of the cord, and neuritis of the cauda equina (!) gave the lowest cell counts, although the large tumors of the conus and cauda equina always gave a very high count. It is of interest that in intramedullary growths a pleocytosis was frequently observed. The same increase occurred in pachymeningitis, meningomyelitis, toxic myelitis, and in Pott's disease.

We have made no mention of the pressure of the cerebrospinal fluid because our records are not complete in this respect. We have found so many variations in the cerebrospinal fluid pressure in spinal diseases that we have not laid much stress on the pressure under which the fluid escaped from the needle. Nor have we found that the presence of substances which reduce Fehling's solution has any diagnostic value. In all but one of our cases the Fehling test was positive.

Excluding the giant tumors of the conus and cauda equina, the highest number of cells to the cubic millimeter in extramedullary growths was 8; in intramedullary growths, the highest number of cells was 26.

As none of our patients with multiple sclerosis had an excess of globulin in their fluid, this absence of globulin may be a useful diagnostic aid in the differentiation between multiple sclerosis and spinal cord tumor, in the occasional patient in whom the diagnosis is difficult.

The absence of an increase in globulin and the low cell count in the cases of neuritis of the cauda equina may be of value in distinguishing these cases from tumors in that location.

In the cases of pachymeningitis and meningomyelitis, the findings were less constant, a protein excess and higher cell count being more often seen in the latter; both conditions gave, as a rule, a higher cell count than extramedullary cord tumors.

TABLE 2.—FINDINGS IN NINETY-TWO CASES

Condition	No. Cases	Wassermann Reaction, Cerebrospinal Fluid	Globulin Excess	Globulin Negative	Average Cell Count	Maximum Cell Count	Minimum Cell Count	Xanthochromosis	Spontaneous Coagulation	Reduction of Fehling's Solution
Extramedullary tumor	20	18— 2+	20	0	2	8	0	6	3	20
Multiple sclerosis	15	15—	0	15	1.4	4	0	0	0	15
Intramedullary tumor	12	12—	11	1	9.5	26	0	0	0	12
Pachymeningitis	9	9—	3	6	3.7	30	0	0	0	9
Meningomyelitis	6	6—	3	3	14.3	31	0	0	0	6
Varicose veins of cord	5	5—	3	2	2	4	0	1	0	5
Syringomyelia	5	5—	2	3	11.8	59	0	0	0	5
Tumor of the cauda equina	4	4—	4	0	79.2	79	6	4	4	4
Neuritis of the cauda equina	4	4—	0	4	.3	20	0	1	0	4
Old fracture of vertebrae	3	3—	3	0	2	4	0	0	0	3
Toxic myelitis	2	2—	2	0	31.5	32	31	0	0	1
Tuberculoma of the cord	1	1—	1	0	5	5	5	0	0	1
Tuberculous spondylitis	1	1—	1	0	30	30	30	0	0	1
Aneurysm of spinal vessels	1	1—	1	0	59	59	59	0	0	1
Spondylitis	1	1—	0	1	0	0	0	0	0	1
Foreign body in cord	1	1—	1	0	5	5	5	0	0	1
Hematomyelia	1	1—	0	1	0	0	0	0	0	1
Transverse myelitis	1	1—	1	0	3	3	3	0	0	1
Totals	92	90— 2+	56	36	....	..	..	12	7	91

THE DIAGNOSTIC VALUE OF CHANGES IN THE CEREBROSPINAL FLUID

The presence of "Froin's syndrome"[5] in the cerebrospinal fluid (yellowness, an increased number of lymphocytes, and a rapid coagulation) has been in our experience characteristic only of the large tumors of the conus and cauda equina, which were described by Collins and Elsberg.[6]

The syndrome of Nonne[7] (excess of globulin without cell increase) is more often found in tumors of the cord at other levels. But a combination of the features of the fluids described by Froin and Nonne—yellowness, no increase or only a slight increase of cells and an increase of globulin—while not as frequent as Nonne's syndrome, is more characteristic of extramedullary compression by tumor and is quite rare in any but extramedullary tumors.

Xanthochromia and spontaneous coagulation point rather to a disease in the lower dorsal or lumbar regions as do very high cell counts.

For the differentiation between extramedullary and intramedullary tumors, the cell count may be of value.

While the diagnosis of a spinal cord disease was never made entirely from the changes in the spinal cord, the findings were a valuable aid in enabling us to arrive at a correct diagnosis.

CONCLUSIONS

1. Xanthochromia is strongly suggestive of spinal cord tumor, in the lower dorsal and lumbar regions.
2. The combination of yellowness, high protein content, spontaneous coagulation and pleocytosis (Froin's syndrome) is characteristic of the large endotheliomas or sarcomas which surround the conus and roots of the cauda equina.
3. Nonne's syndrome (increase of globulin, without increase of cells) is suggestive of extramedullary spinal cord tumor.
4. Increase of globulin without increase of cells plus yellow discoloration of the fluid make the diagnosis of extramedullary spinal cord tumor very probable.
5. The changes in the fluid may be a valuable aid for the differentiation between spinal diseases in which operative interference may be necessary.
6. The diagnosis of a spinal disease should never be made from the spinal fluid findings alone; the results of the examination of the fluid obtained by lumbar puncture should be used only as a diagnostic aid.

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6. Collins and Elsberg: Am. Jour. Med. Sc., 1914, **147**, 493.
7. Nonne: Deutsch. tschr. f. Nervenh., 1913, **47**, 436.

EFFECT OF INGESTION OF COFFEE, TEA AND CAFFEIN ON THE EXCRETION OF URIC ACID IN MAN*

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The widespread use of coffee as a beverage, together with the marked physiologic effects attendant on the ingestion of caffein, either directly or as one of the constituents of coffee, naturally led physiologic chemists to investigate the fate of caffein in the body. As far back as 1850, Lehmann[1] reported that after caffein had been administered in the food, no trace of it as such was found in the urine. Experiments reported by later investigators show widely varying results, but most of them indicate that after coffee has been drunk or caffein administered with the diet, only a very small part of the ingested caffein appears unchanged in the urine.

In the meantime 1-7-dimethylxanthin, 1-monomethylxanthin and 7-monomethylxanthin had been isolated from human urine and carefully studied. Not many years later Albanese,[2] in experiments with dogs, and Bondzynski and Gottlieb,[3] in experiments with dogs, rabbits and men, demonstrated that the monomethylpurins of the urine are formed by the demethylation of ingested dimethylpurins and trimethylpurins. Krüger and Salomon[4] furnished a remarkable analysis of the purin base content of normal human urine, and Krüger and Schmid[5] demonstrated that since there is every reason to believe that in man the methyl groups are decreasingly stable in the order 7, 1, 3, the methyl purins of normal human urine can be easily accounted for by the removal of the methyl group occupying position three from the methylated purins of the food.

Since demethylation is known to take place, it seems quite possible that some of the ingested caffein may be completely demethylated and the resultant purin subsequently oxidized to uric acid. In 1868, Leven,[6] using a very inaccurate method, found no increase in uric acid after drinking coffee. Schutzkwer[7] and Minkowski[8] reported that caffein did not increase the uric acid excretion of dogs. These results are not surprising today since the chief end-product of purin metabolism in the dog is now known to be not uric acid, but allantoin; and it is interesting to compare these early observations with those of Schittenhelm,[9] who found that in dogs caffein does cause an increase in excretion of uric acid and of allantoin.

Burian and Schur[10] and Zagari and Pace[11] reported that in men the ingestion of caffein has no effect on the quantity of uric acid excreted. According to Hess and Schmoll,[12] on the contrary, there is an increase after tea and cocoa drinking, and a similar increase was obtained by Haig[13] and Taylor[14] after coffee drinking. Haig's results are scarcely dependable, owing to his use of the inaccurate Haycraft method; and in Taylor's experiments it is very difficult to account for so large an increase in uric acid as the result of ingestion of so small a quantity of coffee on the basis of caffein as the sole cause of increased uric acid excretion. Although these early observations are of great interest, they can scarcely be accepted as incontrovertible proof of the relation of caffein ingestion to uric acid excretion, since none of the earlier methods for the quantitative determination of uric acid were sufficiently exact to show accurately the slight increase in uric acid excretion that might possibly follow coffee drinking.

Quite recently, however, Benedict[15] has reported a single carefully conducted experiment in which the results indicate that ingestion of caffein does slightly increase the excretion of uric acid.

NEW EXPERIMENTS

The present series of investigations was undertaken with the object of determining more exactly the effect of caffein ingestion on the excretion of uric acid.

Plan and Methods.—The subject of the experiment was placed on a purin-free diet consisting of eggs, milk, bread, butter and fruit. To this ration, after the excretion of uric acid had reached an endogenous level, there was added on each of five consecutive days a known quantity of a strong coffee infusion, of which the caffein content was determined.

The urine was collected in twenty-four hour periods beginning and ending at 7 a. m. Total nitrogen was determined by the Kjeldahl-Gunning method, creatinin by the Folin method and uric acid by the Benedict modification[16] of the Folin-Denis method. Owing to certain difficulties in the technic of this procedure which were encountered in the course of our study, a slight modification of the method was devised.[17]

No experiments were performed to determine the reaction of caffein, heteroxanthin, paraxanthin or 1-methylxanthin with the uric acid reagent, but since the work of Lewis and Nicolet[18] indicates that none of the methylated xanthins causes a color development with the uric acid reagent, it was assumed that the presence of methylated xanthins in the urine offered no obstacle to the use of the Benedict method.

The daily ration of coffee was prepared by boiling 110 gm. of coffee in a liter of water for twenty minutes, decanting, making up to 1 liter, removing a 50 c.c. aliquot for analysis, and concentrating the remainder to about 400 c.c. The caffein content was obtained thus: The sample was diluted to 200 c.c., precipitated with basic lead acetate and filtered; after removal of any excess of lead with hydrogen sulphid, the filtrate was concentrated on a water bath to 50 or 75 c.c., cooled and extracted four times with its own volume of chloroform; the chloroform extract was heated on an electric plate for two hours at 75 C., cooled, and weighed as caffein.

Experiment with Coffee.—The first experiment consisted of the ingestion of a purin-free diet until the

* From the Sheffield Laboratory of Physiological Chemistry, Yale University.

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18. Lewis and Nicolet: J. Biol. Chem., **16**, 369.

endogenous level of uric acid excretion was reached, followed by the addition of large quantities of coffee to this diet on each of five consecutive days, and the resumption of the simple purin-free diet until uric acid excretion again reached an endogenous level. The results of this experiment are shown in Table 1.

TABLE 1.—EFFECT OF COFFEE INGESTION ON URIC ACID EXCRETION

Date	Body Weight, Kg.	Composition of Urine				Remarks on Diet
		Volume, C.c.	Total Nitrogen, Gm.	Creatinin, Mg.	Uric Acid, Mg.	
Mar. 10	48.3	1,115	6.47	799	272	Purin-free
11	....	1,110	8.28	780	268	Purin-free
12	48.5	855	7.45	767	217	Purin-free
13	47.9	1,385	9.30	747	251	Purin-free
14	47.9	1,365	8.90	763	270	Purin-free
15	47.8	2,050	9.45	761	353	Purin-free, with daily allowance of coffee containing 1.3 gm. caffein
16	47.2	1,105	9.26	792	453	
17	47.6	1,065	8.52	767	469	
18	....	1,375	9.81	763	537	
19	47.5	1,395	8.78	801	461	
20	47.9	1,180	7.81	803	339	Purin-free
21	48.0	1,350	8.77	781	276	Purin-free
22	47.9	1,130	9.33	750	209	Purin-free

From these results it is evident that the ingestion of large quantities of coffee is followed by a marked increase in the quantity of uric acid excreted.

Experiment with Decaffeinated Coffee and Caffein.—In order to determine whether or not the increased uric acid excretion observed in the first experiment was due to the caffein ingested, the subject was again placed on a purin-free diet until the excretion of uric acid reached an endogenous level; then for each of eight consecutive days there was added to the diet an infusion of a decaffeinated coffee (Kaffee Hag[19]) prepared in exactly the same way as the coffee of the preceding experiment. On the fifth and sixth days of Kaffee Hag ingestion, there was added to the Kaffee Hag 0.47 gm. of caffein in the form of caffein citrate; on the seventh and eighth days, 0.94 gm. was added in the same way. On the next day, purin-free diet was

TABLE 2.—THE EFFECT OF KAFFEE HAG AND CAFFEIN INGESTION ON EXCRETION OF URIC ACID

Date	Body Weight, kg.	Composition of Urine				Remarks on Diet
		Volume, C.c.	Total Nitrogen, Gm.	Creatinin, Mg.	Uric Acid, Mg.	
Mar. 29	48.3	1,175	8.77	780	374	Purin-free
30	48.3	975	8.48	790	286	Purin-free
31	48.4	1,000	8.53	794	295	Purin-free
April 1	....	1,320	9.80	809	290	
2	48.3	1,270	8.28	816	241	Purin-free, with Kaffee-Hag
3	48.2	1,050	8.74	773	241	
4	47.8	1,250	8.17	804	307	Purin-free, with Kaffee-Hag and 0.47 gm. caffein daily
5	48.1	1,300	7.78	752	333	
6	47.5	1,480	8.05	807	366	Purin-free, with Kaffee-Hag and 0.94 gm. caffein daily
7	47.2	1,370	7.78	755	355	
8	....	675	7.62	750	264	Purin-free
9	47.6	825	8.22	743	268	Purin-free
10	47.6	1,000	8.43	728	274	Purin-free

resumed, and continued until uric acid excretion again reached an endogenous level. The results of this experiment are shown in Table 2.

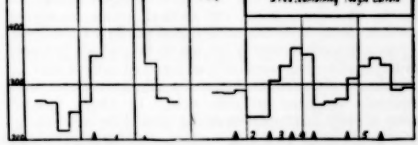
Since the addition of Kaffee Hag to the diet was not followed by any increase in uric acid excretion until caffein was also included in the ration, it seems safe to assume that the increased uric acid excretion of the first experiment was due to the caffein of the ingested coffee.

Experiment with Tea.—As tea also contains large quantities of caffein, it seemed possible that an experiment on tea ingestion might prove of interest. Except that tea was substituted for coffee, the procedure was like that of the first experiment. Each day's ration of tea was prepared by pouring 400 c.c. of boiling water on 28 gm. of tea, allowing it to steep for twenty minutes, and decanting. Caffein was determined by the same method as in the earlier experiment. The results of this experiment are shown in Table 3.

TABLE 3.—EFFECT OF TEA INGESTION ON THE EXCRETION OF URIC ACID

Date	Body Weight, Kg.	Composition of Urine				Remarks on Diet
		Volume, C.c.	Total Nitrogen, Gm.	Creatinin, Mg.	Uric Acid, Mg.	
April 8	....	675	7.62	750	264	Purin-free
9	47.6	825	8.22	743	268	Purin-free
10	47.6	1,000	8.43	728	274	Purin-free
11	47.3	1,355	8.12	737	312	Purin-free, with tea, containing 0.96 gm. caffein daily
12	47.3	1,600	7.84	776	333	
13	47.6	1,240	7.62	769	348	
14	47.9	850	8.68	810	336	Purin-free
15	....	1,320	10.08	797	293	Purin-free
16	48.3	1,350	9.45	764	295	Purin-free

It was found that the ingestion of caffein in tea was immediately followed by increased uric acid excretion.


Mgs. of Uric Acid
Purin-free diet with addition of
1 Coffee containing .13 gm Caffein
2 Kaffee Hag
3 Kaffee Hag with .47 gm Caffein
4 Kaffee Hag with .94 gm Caffein
5 Tea containing .96 gm Caffein
Days

Relation of ingestion of coffee, caffein and tea to excretion of uric acid.

A comparison of the three tables reveals the fact that the increase in uric acid excretion was proportional to the quantity of caffein ingested; this relation is shown in the graph. The increase in the amount of uric acid excreted could be explained as perhaps due to the demethylation and subsequent oxidation of about 13 per cent. of the ingested caffein.

COMMENT

The results of this series of investigations suggest interesting possibilities for further research. Additional experiments should be performed to determine whether or not the increase in uric acid excretion is always directly proportional to the quantity of caffein ingested. At the same time the purin base content of the urine should be determined in order to learn whether the increase in uric acid excretion is due directly to the conversion of caffein itself into uric acid or to an indirect stimulation of purin metabolism.

The whole question is further complicated by the presence of tannin derivatives in all the beverages under discussion. Earlier observations of Levison,[20]

19. For analysis of Kaffee Hag, see Part V of the Report of the Connecticut Agricultural Experiment Station, New Haven, 1915.

20. Levison, C.: Inaug. Diss., Bonn, 1897.

Dolff,[21] Bohland,[22] and Sabrezas and Frezal[23] indicate that ingestion of tannic acid and tannin causes a decrease in uric acid excretion; those of Weiss[24] and Ulrici[25] fail to show any such results. This phase of the problem could be settled by an experiment similar to the second one of this series, a detannated coffee being used in place of a decaffeinated product.

Finally, it would doubtless prove interesting to perform similar series of experiments with dogs and rabbits in order to study the effect of caffein ingestion on the excretion of uric acid and of allantoin in species in which uric acid is not the prominent normal end-product of purin metabolism.[26]

SUMMARY

Slight modifications of Benedict's method for determining uric acid make possible more accurate determinations than have hitherto been obtained.

The addition of a strong coffee infusion to a purin-free diet causes a marked increase in the excretion of uric acid.

The addition of Kaffee Hag—a decaffeinated coffee product—to a purin-free diet does not cause any increase in the excretion of uric acid. If, however, caffein is added to the Kaffee Hag, the excretion of uric acid is decidedly increased, as in the case of coffee.

The effect of adding tea to a purin-free diet is similar to that obtained by adding coffee to the same diet.

The increase in excretion of uric acid after adding coffee, tea or caffein to a purin-free diet seems to be proportional to the quantity of caffein ingested.

The increase in the amount of uric acid excreted under these conditions is equal to the quantity of uric acid which would be obtained by the demethylation and subsequent oxidation of from 10 to 15 per cent. of the ingested caffein.

21. Dolff, F.: Inaug. Diss., Bonn, 1898.
22. Bohland, K.: München. med. Wchnschr., 1899, **46**, 505.
23. Sabrezas and Frezal: Jour. de physiol. et path. gén., 1899, **1**, 221.
24. Weiss, J.: Ztschr. f. physiol. Chem., 1899, **27**, 216.
25. Ulrici, T.: Arch. exper. f. Path. u. Pharmakol., 1901, **46**, 321.
26. In addition to the references already given, the following will be found of interest:
Brugsch, T., and Schittenhelm, A.: Der Nucleinstoffwechsel und Seine Störungen, 1910.
Jones, W.: Nucleic Acids, 1914.
Krüger, M., and Schmidt, J.: Arch. f. exper. Path. u. Pharmakol., 1901, **45**, 259; Ztschr. f. physiol. Chem., 1905, **45**, 1.
Levison, C.: Ztschr. f. klin. Med., 1894, **26**, 293.
McCrudden, F.: Uric Acid, 1905.

The Work Treatment.—Those of us who have any imagination cannot fail to realize the difference in atmosphere and *morale* in hospitals where the patients have nothing to do but smoke, play cards, or be entertained, from that found in those where for part of the day they have regular, useful and productive work.—Col. Robert Jones, C.B.

AN AUTOMATIC METHOD OF PROLONGED SERIAL BLOOD-PRESSURE REGISTRATION IN MAN*

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CHICAGO

Work on this apparatus was commenced in 1909, when the desirability of a method for the continuous observation of human blood pressure was strongly borne in on my mind, as I investigated at the Charité in Berlin in association with Professor R. Staehelin the effect of muscle work on human blood pressure by means of the Uskoff sphygmotonometer. It became probable that this effect was, in general, a curve with a primary rise above and a secondary fall below the previous level; but we could not prove this: for, in spite of taking an observation every five minutes, one could not feel certain that one had caught the maximum and the minimum of the effect.

The work of elaborating such an apparatus has since then been continued abortively until, in the summers of 1915 and 1916, Dr. Otis M. Cope, of the department of physiology of the University of Michigan, joined me in a final effort, which we believe has succeeded. The result of this joint work, carried on at the laboratory of physiology of the University of Michigan, was the elaboration of the principles that underlie the construction of an apparatus for the purpose in mind, and the development of a valve, chiefly the design of Dr. Cope, which, however, was not entirely satisfactory. Under the impression that a somewhat different method of attack on the problem of construction of the valve might possibly lead to a more satisfactory result, I have continued work on this apparatus at my laboratory with the cooperation of the mechanic, Edward L. Feeney, who deserves thanks for patient help and useful suggestions in the elaboration of the rotary valve.

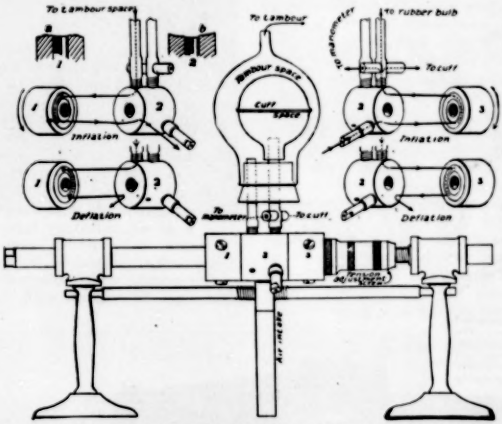

Fig. 1.—Rotary valve, assembled in center, the working faces of the valve on each side. The numbers 1, 2 and 3 have been placed on corresponding parts of the valve in all portions of the illustrations. The longitudinal sections *a* and *b*, in the left hand upper corner, show the manner in which air-tight closure of the valve faces is obtained.

THE APPARATUS

The essential portion of the apparatus is a rotary valve, which takes care of the rhythmic inflation and deflation of the sphygmomanometer cuff, while it simultaneously opens the tambour space of an Erlanger arrangement during the inflation and deflation, and closes it during the time of recording.

* Presented before the Chicago Society of Internal Medicine, March 26, 1917.
* From the Pharmacologic Laboratory of the University of Illinois, College of Medicine.

The author wishes to express his thanks for patient help and useful suggestions in the elaboration of the rotary valve.

There are, then, in the apparatus, two air spaces that do not open into each other. I shall call them

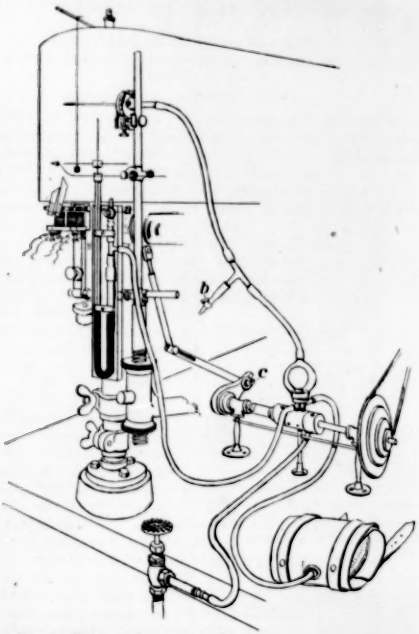

Fig. 2.—Rotary valve connected with the recording apparatus. The valves *a* and *b* introduce a regulable fine leak in the tambour space and cuff space, respectively. The cam *c* operates the starting and stopping mechanism of the kymograph.

"cuff space" and "tambour space," respectively (Fig. 1). The cuff space communicates freely with a mercury manometer and an elastic rubber bulb. The manometer records, on smoked paper, the height of the pressure existing in the cuff space at a given moment. The rubber bulb transmits to the tambour space the pulse oscillations occurring during the gradual deflation of the cuff. To inflate the cuff, a constant source of compressed air at a pressure of over 300 mm. of mercury is required. In the air intake pipe, there should be provided a valve that readily permits slight changes to be made in the air admitted to the cuff space. This valve, once turned on to the proper degree, remains open throughout the period of use of the apparatus. By means of the rotary valve, which revolves at the rate of about once a minute, a momentary connection is made between the tube carrying the compressed air and the cuff space. Thus inflation is accomplished. Then, for two thirds of the circumference of the valve, the cuff space is closed, excepting for a small regulable leak (Fig. 2 *a*), which permits gradual deflation to take place. Since, during the period of gradual deflation, the tambour (to be presently described) records the tracing to be interpreted, I shall speak of this as the "recording time." As soon as the recording has been accomplished, it is desirable to have the air escape rapidly from the cuff space, so as to permit a period of rest for unimpeded return circulation in the arm of the person under examination. We have found that one third of a minute is sufficient for this purpose. Hence, after the rotary valve has traveled for two thirds of its circumference, an opening is encountered by means of which the cuff space communicates with the surrounding air, permitting the pressure to fall instantly.

The cuff space is in relation with the tambour space by means of a glass bulb into which the rubber bulb of the cuff space projects, all the connections being air-tight. Thus the oscillations of the rubber bulb, imparted to it by the pulse, are magnified and recorded by means of the tambour. To eliminate, as much as possible, the recording of the large pressure oscillations that occur during inflation and rapid deflation of the cuff space and might damage the tambour, it is necessary, as has been shown by Erlanger, that the tambour space be freely open during these stages. This is accomplished by holes placed in that side of the rotary valve which controls the tambour space. These holes are spaced in such a manner as to act synchronously with those controlling the cuff space. The holes, in relation with the tambour space, must

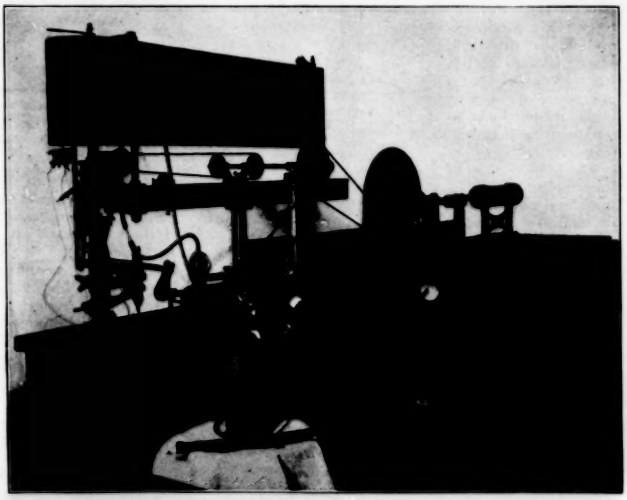

Fig. 3.—Photograph of apparatus, showing valve and driving as well as recording mechanisms used. A much simpler driving mechanism would, of course, be entirely adequate. A pneumograph and its recording tambour is shown in addition to the parts given in the diagrammatic Figure 2.

be a little larger than those in relation with the cuff space, whereby the large and undesirable oscillations can be more effectually eliminated, than if they are of exactly the same size. As Erlanger has shown, it is also essential that a fine leak exist in the tambour space. Cope has found that, by using an adjustable leak (Fig. 2 *b*), one may obtain an optimum record of the oscillations of the bulb.

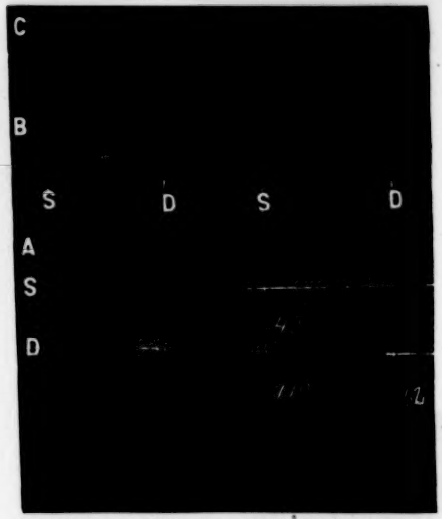

Fig. 4.—Determination of systolic and of diastolic pressure: The Erlanger criterion for systolic pressure, namely, the first divergence of the two limbs of the tambour record (*S* in Curve B) is well shown. The diastolic criterion chosen is the last large oscillation of the tambour lever (*D* in Curve B). This is more difficult to decide on, owing to the disturbing influence of respiration, as is well shown in this tracing by the unusually deep inspiration at the end of the tracing, which obviously produced the increase in the size of the tambour oscillation following it and which would have given rise to difficulty of interpretation of the record, had the respiration record not been taken simultaneously. In the tracings, *A* is the manometer curve, *B*, the tambour record, and *C* the respiration record; *S* indicates the level of systolic pressure, and *D* the level of diastolic pressure.

In order to economize drum space, it is desirable to have a mechanism that automatically starts and stops the drum. This may be done by means of a cam (Fig. 2 *c*), attached to the shaft of the rotary valve, which operates the starting mechanism of the drum.

A long paper kymograph is required, as well as signal magnets for the time and other recording. A second tambour for a pneumograph tracing (*C* in Figs. 4 and 5) is also desirable, as respiration affects the character of the pulse oscillations, as is shown by Figure 4.

We have commenced work on the problem of an apparatus that will furnish its own compressed air, as well as, if possible, do away with the necessity of applying fresh loops of paper, when one takes a very prolonged record.

INTERPRETATION OF THE RECORD

The records (Figs. 4 and 5) furnished by this apparatus consist of a succession of so-called "continuous" Erlanger[1] tracings (*B*), placed above a manometer curve (*A*) that was obtained synchronously with the pulse tracing. The latter is used to determine the points of systolic and of diastolic pressure (Fig. 4). For determining systolic pressure, we have found the Erlanger[2] criterion, namely, the separation of the lower end of the limbs of the tambour record, much more useful than the von Recklinghausen[3] criterion — that is, the sudden increase in size of the oscillations — for, at times, the increase in size is not at all sudden, but quite gradual.

The decision regarding the point at which the diastolic pressure is to be placed seems somewhat more difficult. Erlanger's[1] criterion for diastolic pressure — the maximum amplitude of tambour oscillations — has been shown by MacWilliam and Melvin[4] not to be correct. They suggest using the last of the large oscillations for this purpose. Cope and I have found that the MacWilliam and Melvin criterion coincides quite well with the fourth auscultatory phase obtained by means of the Korotkoff method, as shown by records obtained with our apparatus, when a signal magnet (whose tracing is placed in the accompanying figures above the time record) is used to record the Korotkoff sounds, as has been done in some of the curves shown. Unfortunately, at times, the oscillations decrease gradually rather than abruptly, so as to leave one in doubt as to just where one should decide the change has taken place. This difficulty can be overcome, to a certain extent, by permitting the escape of air during the recording period to be sufficiently rapid for good definition of differences. Nevertheless, the influence of the respiratory pressure changes occasionally also adds to the difficulty of arriving at a judgment regarding the point to be chosen.

Making a simultaneous record of the Korotkoff sounds by means of the signal magnet is quite helpful in the interpretation of the record. Nevertheless, I have found that frequently, when doubt exists as to

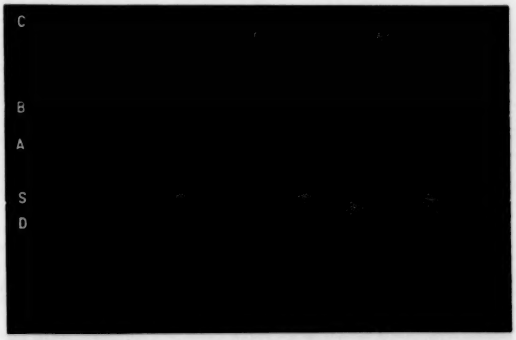

Fig. 5.—Portions of a record from a normal person, showing the practically uniform maintenance of pulse pressure that seems characteristic of normal tracings.

1. Erlanger, Joseph: Johns Hopkins Hosp. Rep., 1904, **12**, 53.
2. Erlanger, Joseph: Am. Jour. Physiol., 1908, **21**, 24.
3. Von Recklinghausen: Arch. f. exper. Path., 1906, **55**, 375.
4. MacWilliam and Melvin: Heart, 1914, **5**, 153.

where one should place the diastolic pressure, because of interference of the respiratory oscillations, the same doubt existed in deciding on the end of the fourth phase of Korotkoff. For, at times, one or two of the muffled sounds of the fourth phase are followed by one or two sounds that are again quite loud. The tracing records this faithfully.

By projecting the point of systolic and of diastolic change in the pulse tracing (*B*) down on the manometer curve (*A*), and by connecting the corresponding points on succeeding manometer curves, a good picture of the blood-pressure changes from minute to minute can be obtained. These changes are comparatively slight under normal conditions, though waves, probably corresponding to the Traube-Herring waves, are easily discernible. By means of this apparatus, I have obtained satisfactory records of the influence on blood pressure of emotion, of attention as well as of muscular movement, and of the effects of a general electric light bath, of amyl nitrite inhalation, and of nitroglycerin administration.

CONCLUSION

An apparatus having been devised whereby it is possible to obtain graphic records of human blood pressure for considerable periods of time, it will probably be found useful not only in psychologic, physiologic and pharmacologic research, but also in clinical medicine, in diagnosis as well as in treatment. For instance, it might be of diagnostic as well as of therapeutic importance to differentiate between those cases of high blood pressure that respond, in a typical manner, to nitrite and those that do not. In critical operative cases, the continuous recording of blood pressure during the anesthesia might be of help to the surgeon.

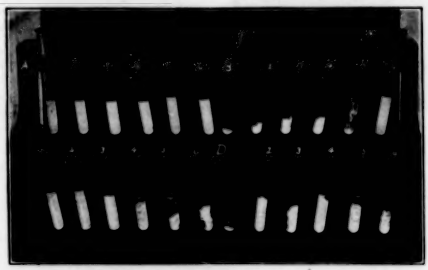

Fig. 1.—Mastic reactions: *A*, negative; *B*, positive; in both *A* and *B*, potassium carbonate has been used in making up the salt solution; *C* and *D*, the same cases in the absence of the potassium carbonate. (Note the confusion in *C*, in which Tubes 4 and 5 show a precipitate.)

Blood Changes in Trinitrotoluene Poisoning.—Capt. Matthew J. Stewart of the Royal Army Medical Corps has recently summed up his observations in fourteen clinical cases of trinitrotoluene poisoning with reference to the blood as follows: In the early stages blood changes are extremely slight, but pronounced deviations occur later. A polymorphonuclear leukopenia, often of extreme degree, with no corresponding failure of the lymphatic function, was observed in nine out of the fourteen cases. An anemia of "pernicious" type, but lacking certain notable characteristics of idiopathic anemia, especially poikolocytosis and punctate basophilia, occurred in three cases. The tentative conclusion arrived at is that the occurrence of either of these changes in any marked degree in a case of trinitrotoluene poisoning is to be regarded as a serious prognostic indication, but this is a point on which further observation should throw much light. An absolute but variable lymphocytosis was found in nine cases. It did not appear to bear any relationship to either of the foregoing conditions. A pronounced and progressive neutrophil leukocytosis occurred in one case which ended fatally. Qualitative changes in the red cells were present in a marked degree in one case only, and punctate basophilia was never observed. —*Proceedings of the Royal Society of Medicine*, March, 1917.

A NEW MASTIC TEST FOR THE SPINAL FLUID*

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Recently much work has been done in order to find a serologic test which will be positive in all cases of syphilis of the nervous system. Collins[1] estimates that 15 per cent. of paretics and 70 per cent. of cerebrospinal syphilitics fail to give a positive Wassermann reaction in the spinal fluid. While these figures are perhaps higher than the average, the fact still remains that a definite percentage do fail to give a positive Wassermann. Collins[1] also estimates that 97 per cent. of these cases give a positive colloidal gold reaction. Any one, however, who has prepared the gold solution and has carried out the test cannot but be impressed with the many difficulties it entails.

While working with the colloidal gold solution, Emanuel[2] endeavored to find a substitute which could be more easily prepared and in which the reaction could be carried out with less possibility of error. For this purpose it seemed that an emulsion of mastic was best adapted. Neisser and Friedman, among others, had already demonstrated the similarity in action on albumin of this substance and colloidal gold.

In brief, Emanuel's procedure was as follows: Five test tubes were used containing, respectively, 0.25, 0.125, 0.062 and 0.031 c.c. of spinal fluid mixed with 1 c.c. of a 1.25 per cent. salt solution. The fifth tube contained no spinal fluid, and was used as a control. Lastly, 1 c.c. of an emulsion of mastic was added to each tube. In this manner he tested out the spinal fluids of thirty psychiatric patients. In paresis, tabes and cerebrospinal syphilis there occurred a precipitation of the mastic in all the tubes, whereas in the normal fluid no flaking occurred except in the control. The mastic solution had to be made up fresh each time and quickly used.

In order to try out the reaction, in the last nine months I have made mastic tests on the spinal fluids of 200 different patients at the Agnews State Hospital. In each case I have made a cell count, in 100 cases the butyric acid test, and in thirty cases the colloidal gold reaction. In every case a Wassermann examination has been made.

The mastic reaction I found to be a very delicate one. If the salt solution and the emulsion of mastic were made with distilled water and promptly used, a rapid precipitation of the mastic occurred in the control tube which contained no spinal fluid. If, how-

* Read before the Agnews Psychiatric Society, Feb. 9, 1917.

1. Collins, Joseph: Pathognomonic Alterations of the Cerebrospinal Fluid in Syphilis of the Nervous System, Am. Jour. Med. Sc., 1916, **151**, 222.

2. Emanuel, G.: Eine neue Reaktion zur Untersuchung des Liquor cerebrospinalis, Berl. klin. Wchnschr., 1915, **52**, 781-804; abstr., The Journal A. M. A., Sept. 4, 1915, p. 908.

ever, tap water was employed, no precipitate appeared. Even washing the test tubes with tap water prevented the reaction. The older the mastic emulsion the stronger was it necessary for the solution of sodium chlorid to be in order to cause a precipitate.

Also, I found that when newly prepared solutions were made with freshly distilled water there was a tendency for the precipitations to occur, not only in the fifth tube but also in the fourth, even in negative cases. This led to some confusion in interpreting the results. It was useless to employ more than four tubes, as further dilution left so little spinal fluid in the mixture that the salt automatically caused a precipitation of the mastic, whether the case was a positive or a negative one.

I found, however, that when the control showed no precipitation, as when the solutions were made with tap water, pathologic spinal fluid still caused the mastic to come down. I then endeavored to find a reagent which could be used with distilled water to hold the salt and mastic in solution and which would be of universal adaptability, since tap water varies so greatly in different localities. After trying many substances, such as potassium hydroxid and lime water, I at length found that a very dilute solution of potassium carbonate answered this purpose perfectly. When 1 c.c. of a 0.5 per cent. solution of the potassium carbonate was put in each 99 c.c. of the 1.25 per cent. salt solution, the mastic was held in suspension and was precipitated only when the pathologic fluid was added. This allowed me to run the dilution out as far as I liked, and the control tube, instead of showing a precipitation, showed none.

The advantage of this is readily seen in the following experiment: After mixing 1 drop of a paretic's spinal fluid with 7 drops of normal fluid I was able to get a mixture with a low syphilitic content. By using these proportions I ran a mixture through two series of five tubes each (*a*) in which no potassium carbonate was used and (*b*) in which the carbonate was employed. In *a* the result was a precipitation of the mastic in the first two and the last tubes. In *b* a precipitation showed only in the first two tubes. When 2 drops of syphilitic fluid were used in the mixture, the first four tubes in *a* came down together with the control. In *b* only the first four tubes were precipitated. This ended the experiment in the group containing no potassium carbonate, as all the tubes were now precipitated. In the series, however, containing the potassium carbonate, in which it was possible to increase the number of tubes in the group without automatically causing a precipitation of the mastic, the undiluted syphilitic fluid caused six tubes to come down. In other words, the greater the percentage of pathologic fluid present, the greater the number of tubes precipitated in the series. This clearly demonstrates, it seems to me, that the degree of positiveness in a given case can be more accurately measured when the potassium carbonate is employed to hold the mastic in suspension.

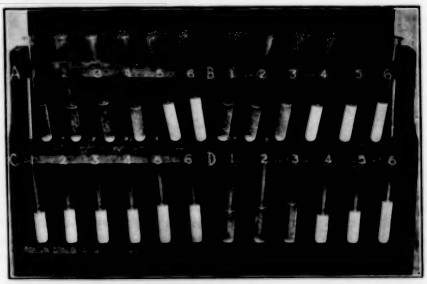

Fig. 2.—Mastic reactions: *A*, in an old paretic; *B*, in an early case of paresis; *C*, negative reaction in a case of dementia præcox; *D*, reaction in a case of paresis under salvarsanized serum treatment. (Before treatment, Tubes 1, 2, 3, 4 and 5 showed a precipitation.)

The following I have found best adapted as a routine for doing the test:

A stock mastic solution is made by dissolving 10 gm. of gum mastic in 100 c.c. of absolute alcohol, and then filtering. This stock solution keeps indefinitely if well corked. To 2 c.c. of this solution 18 c.c. of absolute alcohol are added, and insufflated rapidly into 80 c.c. of distilled water. This makes an emulsion of mastic which is opalescent when held to the light. This solution can be used immediately or after several days; indeed, the reactions seem to be more easily read when a solution is employed which has stood for at least a few hours.

Next, a 1.25 per cent. sodium chlorid solution is made with distilled water, and to each 99 c.c. of this salt solution is added 1 c.c. of a 0.5 per cent. solution of potassium carbonate made up with distilled water.

Then six small test tubes, such as are regularly used in the Wassermann tests, or more if desired, are placed in a rack. These tubes should have been washed thoroughly in tap water, then in denatured alcohol, to remove any old mastic adhering to the sides of the tubes, rinsed in distilled water and dried—conveniently in a hot air oven. To the first tube 1.5 c.c. of the combined salt and potassium carbonate solutions are added, and to the other 1 c.c. each. Then 0.5 c.c. of spinal fluid is added to the first, and after thorough mixing 1 c.c. is transferred from the first to the second, 1 c.c. from the second to the third, and so on, the last cubic centimeter that remains over from the next to the last tube being thrown out, and no spinal fluid being put in the control. Now to each tube 1 c.c. of the mastic solution is added and stirred thoroughly with a glass rod, care being taken to wash the rod with distilled water before going to the next series. It is best to finish each group before beginning another.

The racks are set away, and in from twelve to twenty-four hours the end-results can be read. If the racks are placed in an incubator at 37.5 C., the precipitation is complete in from six to twelve hours. A yet more rapid method, I find, is to incubate for two hours and then centrifugalize, in which event the mastic will be precipitated in the positive tubes.

In positive cases the mastic will be precipitated in the first one, two, three or four tubes, and up even as high as the eighth in some. The reaction is simple to read and very convincing. The solutions are easily made; they are extremely inexpensive, and the end-results are much more easily read than in the colloidal gold tests. Indeed, were one to compare the colloidal gold and mastic tests side by side, the mastic is found to be the more convincing. In the fluid of one paretic with 133 cells per cubic millimeter, the colloidal gold showed after twenty-four hours only a 3332100000, whereas the mastic came down in eight of the ten tubes used. It was only after allowing the gold solution to stand for three days that a more complete curve resulted. Three paretic fluids showed irregularities with the gold test, which if taken alone would have been hard to interpret, whereas in all three the mastic showed a typical reaction. The accompanying table shows the classification, the number, and the results

obtained by the mastic and Wassermann reactions on the 200 cases.

In fourteen cases there was a positive mastic and a negative Wassermann reaction. Eleven of these had increased cell counts together with all the clinical signs of paresis and were so diagnosed. Two were diagnosed as cerebrospinal syphilis. The other case giving a positive mastic and a negative Wassermann reaction was that of a man of 50, who two and a half years before entering the hospital had had a "stroke," leaving him with a right-sided paralysis. On entering the hospital he had a mitral insufficiency with casts and albumin in the urine, and died one month later as a result of the heart and kidney complication. He gave a definite history of alcohol with an indefinite history of syphilis. The spinal fluid examination showed a cell count of 10 with an increase of globulin. In no case was there a positive Wassermann and a negative mastic reaction. In two cases in which the mastic test was always positive, the Wassermann test was at first negative, but later became positive.

Of the seven cases of epilepsy, two showed a very slight precipitation in the first tube. Two of the fifty cases of dementia praecox showed the same reaction,

TABULATION OF TWO HUNDRED MASTIC EXAMINATIONS

Classification	Number of Cases	Mastic	Wassermann
Paresis	68	+	+
Paresis	11	+	−
Cerebrospinal syphilis	2	+	+
Cerebrospinal syphilis	2	+	−
Tabes	1	+	−
Dementia praecox	50	−	−
Manic-depressive psychosis	21	−	−
Arteriosclerotic brain dis case	6	−	−
Alcoholic psychosis	6	−	−
Senile psychosis	5	−	−
Involution melancholia	2	−	−
Paranoia	3	−	−
Mental defective	2	−	−
Autointoxication	1	−	−
Epilepsy	7	−	−
Traumatic psychosis	1	−	−
Alcoholism	1	−	−
Cerebral hemorrhage	1	±	−

but these were not to be compared with the precipitation in a positive case. In one patient diagnosed as having cerebral hemorrhage, there was a ± in the first two tubes.

Thus far my work has been confined to psychiatric patients. What the action will be in such diseases as poliomyelitis and tuberculous meningitis must be further investigated.

SUMMARY

The mastic test, when taken together with the history and with the cell count, is of undoubted aid in the diagnosis of syphilis of the nervous system.

By the addition of potassium carbonate, the degree of positiveness can be graded very accurately.

By first incubating and then centrifugalizing, the test can be completed in two hours.

It parallels quite closely the colloidal gold reaction, and is more easily interpreted and much more easily and quickly performed.

In eighty-four cases of syphilis of the nervous system, the mastic test was uniformly positive.

Workmen's Compensation.—Thirty-seven states, the territories of Alaska, Hawaii, and Porto Rico have enacted compensation laws, the United States adopting a like principle for the relief of its civilian employees under date of Sept. 7, 1916.—National Industrial Conference Board.

Clinical Notes, Suggestions, and New Instruments

METHODS FOR THE COLLECTION AND TRANSPORT OF BODY FLUIDS FOR BACTERIOLOGIC INVESTIGATION

ALFRED H. CAULFEILD, M.B.,* TORONTO, ONT.
Captain, Canadian Army Medical Corps

The exigencies of war have made the bacteriologic investigation of the body fluids even more imperative than during times of peace, while at the same time the accommodations surrounding the soldier-patient are frequently less adaptable to bacteriologic technic than they are in civilian practice. Consequently it seems desirable at the present time to record any advantageous modifications in the instruments and apparatus used for the collection and transport of such fluids.

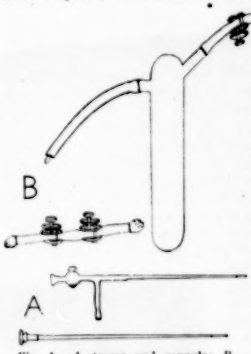

Fig. 1.—*A*, trocar and cannula; *B*, collection tube or flask of quartz glass.

Improvements to be of value should simplify the technic at the bedside, should insure safety and sterility during transport, and should not necessitate elaborate methods of preparation. Indeed, it is most desirable that the value and the result of the final investigation should not be dependent on any special care or expertness on the part of the nurse or lay attendant responsible for the original sterilization or for the transport of the material. In this connection it may be stated that devices by which sterilization may be carried out in the dry oven or autoclave, and which will leave without further manipulation the apparatus or instrument ready for transport, and convenient for use at the bedside, are the most satisfactory and trustworthy. Particularly is this true for those enjoying the facilities of organized hospitals and institutes, as it relieves them of all irksome detail or improvisation. For such metal articles as needles, trocar-cannulas, etc., dry sterilization is preferable,

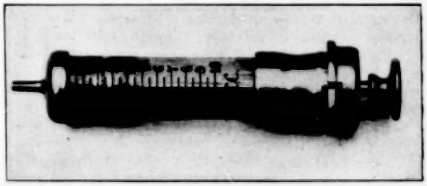

Fig. 2.—Syringe.

in that any possibility of rusting and blocking of the bore is avoided. It is along these lines and with these points in view that I have attempted to develop the technic.

The general satisfaction I have experienced with the method herein described (which is an amplification of those previously used by me) is to a great extent due to the use of quartz glass for certain parts of the apparatus; and as the use of this material, so far as my knowledge or information goes, is not at all general with the profession, I venture

* Detailed for special investigation from No. 4 Canadian General Hospital (University of Toronto).

to present these methods in full, rather than serve them piecemeal in possible future publications. The particular advantage of quartz glass or silica lies in the fact that it has no coefficient of expansion, and consequently will not break or crack in extremes of heat and cold.

COLLECTION OF MATERIAL (SUCH AS CEREBROSPINAL FLUID) BY MEANS OF TROCAR AND CANNULA

The danger of contamination in catching fluid, as it flows from the open end of a straight needle or cannula, as well as the difficulty of avoiding hand contamination incident to the puncture operation, led me to adopt the form of trocar and cannula shown in Figure 1 *A*. The proximal opening of this instrument is ground to fit the nozzle of a syringe, in case the amount of fluid to be drawn is small and not under pressure.

The collection tube or flask of quartz glass is shown in Figure 1 *B*. In my experience tubes of this nature, made of ordinary glass, fail to give satisfaction, and sooner or later break during sterilization. Preparation for sterilization consists in fitting and wiring to the upper arm a short piece of pressure rubber tubing, the open end of which is lightly packed with cotton, and in attaching to the lower arm a short piece of ordinary rubber tubing, the open end of which is plugged with a glass rod. This will later facilitate handling at the bedside. At the same time an extra piece of pressure tubing should be similarly packed at the ends with cotton. The collection flask thus assembled and the separate piece of pressure tubing should be properly wrapped and sterilized in the autoclave. As four pressure tubing clamps

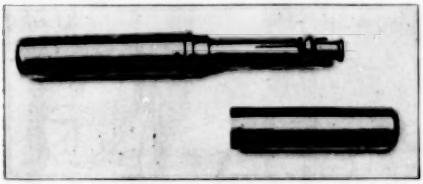

Fig. 3.—Needle holders.

will be required after the tube is filled at the bedside, it is advantageous to tie these to one of the sterilized articles.

Technic at the Bedside.—The cannula and flask are carefully unwrapped, and the soft rubber tubing slipped on the side arm of the former. Any possibility of contamination can be avoided by the use of an alcohol flame. Puncture is made with the collecting tube connected in this fashion to the cannula; then the trocar is withdrawn and the tap turned off. If fluid has appeared at the tap arm opening, it will readily run through the closed passageway into the tube. In case the amount of fluid is so small that it does not flow, a sample may be obtained by fitting a syringe into the cannula.

When the puncture is made, the collecting tube, so to speak, takes care of itself; afterward it should be held upright. When the cannula is withdrawn, the tubing is pinched with the fingers, and afterward separated from the arm of the tube. The opening of the arm with any content of fluid thus exposed should be thoroughly flamed, and while hot slipped into the spare piece of pressure tubing, which can be additionally secured by copper wiring, if this is thought necessary. Finally, by tightly screwing down two clamps on each piece of tubing, these passageways are effectively blocked. The tube is now packed or carried in any position, and is proof against contamination taking place during transport.[1]

COLLECTION OF MATERIAL (SUCH AS BLOOD) BY HYPODERMIC SYRINGE AND NEEDLE

The general satisfaction and convenience that would be afforded, were it possible to sterilize in the dry oven syringe and needles already packed in their cases, led me to devise the syringe, needle holder and case illustrated.

That the parts of the syringe (Fig. 2) need not be separated during sterilization, the proximal end of the graduated quartz glass barrel is cemented to a metal collar corresponding in length to the plunger, and of slightly larger diameter than the plunger to allow for expansion. The collar thus provides, so to speak, a safety expansion chamber for the plunger, which is withdrawn into the chamber during the process of sterilization.

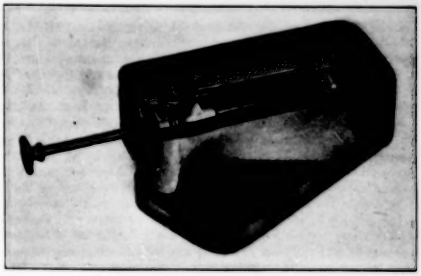

Fig. 4.—Case, and adjustment for sterilization.

As shown in the illustration of the needle holder (Fig. 3), the removal of either protection cap exposes the head of one of two needles. By this means adjustment of the needle of the nozzle of the syringe can safely be made at the bedside. The remaining cap allows one to handle the needle holder with ease and without risk of contaminating the remaining needle or the needle adjusted. In one of the caps there is a small aperture which before sterilization should be adjusted to a similar opening in the inner sheath of the holder to prevent the cap being forced off.

The illustration of the case, and adjustment for sterilization (Fig. 4) shows the syringe with piston extended through an opening in the end of the case, so that the plunger rests in the safety chamber. It is advisable to pack cotton around the needle holder and syringe before replacing the top and sterilizing. As soon as cooling has taken place after dry sterilization, the piston is shoved home into the barrel with sterile forceps, sterile cotton inserted or not as desired, and the opening closed by the shutter. This shutter is so constructed that it is with difficulty opened while the lid is on the case. Sterilization in the manner described insures that everything within the case is sterile, and moreover the syringe and needles will later be found convenient for use at the bedside.

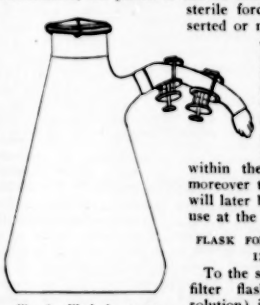

Fig. 5.—Flask for transport of blood in fluid state.

FLASK FOR TRANSPORT OF BLOOD IN FLUID STATE

To the side arm of an ordinary filter flask (containing citrate solution) is attached and wired a short piece of pressure rubber tubing, the open end of which is plugged with cotton (Fig. 5). The mouth of the flask is stoppered with a well fitting rubber cork, which is additionally secured by crossed copper wire. After sterilization in the autoclave, the tubing is blocked by two pressure tubing clamps and the cork paraffined.

Technic at the Bedside.—As everything within the syringe case is sterile, the syringe intact and ready for use, and as the head of the needle can be exposed with safety and ease,

1. Cleaning of these tubes is easily accomplished, as any particles or clots not easily washed out can be completely carbonized over a Bunsen or blast flame.

the adjustment and use of the syringe and needle are very simple. Any possibility of contamination is fully excluded by the use of an alcohol flame. To discharge the blood from the syringe, the needle, on withdrawal from the vein and while still attached to the syringe, is heated and pressed through the cork of the flask. Both clamps on the rubber tubing should be released before depositing the blood, and afterward retightened. The flask may now be packed for transport.[2]

FLASK FOR DISTRIBUTION OF STERILE ENRICHMENT FLUIDS IN QUANTITATIVE AMOUNTS TO CULTURE TUBES

The subsequent bacteriologic investigation of the body fluids is so closely connected with their collection and transport that a brief reference to a device dealing with this aspect may be regarded as within the scope and intention of this paper.

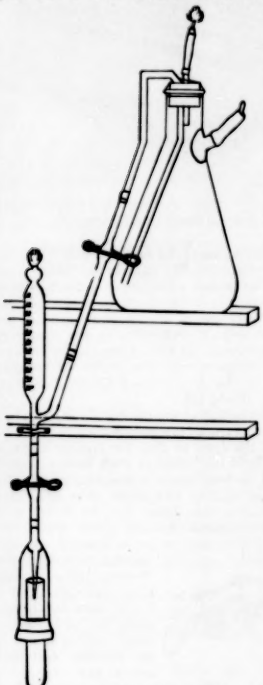

Fig. 6.—Flask for distribution of sterile enrichment fluids in quantitative amounts to culture tubes.

The purpose of the flask is to provide a sterile receptacle so that enriching fluids can easily and without risk of contamination be distributed quantitatively to tubes of the ordinary laboratory mediums. Some such method is almost a necessity if the work is not routine in character. In this part of the work, as well as in the collection of body fluids, simplification in the technical detail is the surest method of incorporating bacteriologic examinations with the practice of medicine.

The arrangement of the apparatus consists in attaching to a large filter flask a graduated tube by means of pressure rubber tubing as shown in Figure 6. The tightly fitting rubber cork of the flask is pierced by a cotton-plugged air vent, and the glass tubing (for siphonage) which is connected to the graduated cylinder. This cylinder plugged with cotton at the top leads by means of pressure tubing to a hooded pipet, which is protected by a test tube held in place by a cork in the manner shown by the illustration. It is safer if all rubber tubing connections and the cork are wired and after sterilization paraffined. As the different fluids must be obtained sterile or rendered so by filtration or other means, the flask thus fully assembled is sterilized before being filled through the side arm, after which this side passageway is properly blocked by a heated rod or tube and clamped. Once the flask is filled, siphonage is obtained by forcing air through the air vent and releasing the clamp to the graduated chamber. As the hooded pipet is made of quartz glass, there is no danger of cracking during the necessary use of the Bunsen flame before and after the withdrawal of the fluid.[3]

2. Besides the individually desired materials for skin sterilization, very few articles need be carried to the bedside when the methods described above are used. Thus for the first type of operation the only necessary articles are: (1) wrapped sterile trocar and cannula; (2) wrapped sterile flask and extra piece of tubing, and (3) spirit lamp. For the second type: (1) sterile case of syringe and needles; (2) sterile flask containing citrate solution, and (3) spirit lamp. My experience with these two types of collecting flasks might be summed up by stating that all specimens of cerebrospinal fluid and blood, collected as described from seven patients, showed no contamination after transport from the North of Ireland to London; and that material shaken and immediately incubated remained sterile.

3. A properly filled flask may quite safely be forwarded, provided all three exits are additionally clamped, and of course breakage guarded against by careful packing. Flasks of 1,000 c.c. of filtered horse serum have provided sterile enrichment fluid for culture tubes until emptied. This means that small amounts have been easily withdrawn on about 200 occasions, without the stock fluid becoming contaminated. The following precautions are suggested on the avenues of infection that might be overlooked: 1. In refilling the graduated tube, care should be taken that the fluid is not allowed to reach the cotton of the air vent. 2. The tube to which the enriching fluid is to be added should be thoroughly flamed before being inserted within the hood, so that there is no possibility of the discharging tip becoming contaminated from the inner wall of the tube. The test tube protecting the tip and blocking the mouth of the hood should be treated in the same way before being reinserted.

THE RATIONAL AND COMFORTABLE TREATMENT OF FRACTURE OF THE CLAVICLE BY MEANS OF A CRUTCH SPLINT

WALTER KELTON, M.D., SEATTLE

Not long ago there came under my observation a case of fracture of the clavicle wherein the Sayre dressing, or Velpau, could not be utilized. The patient, in addition to sustaining a fracture of the clavicle, had also received a severe trauma of the upper arm and forearm of the same side, causing great swelling at the elbow. The arm was fleshy, and this, together with the swelling, made it impossible to use any of the conventional dressings, as in order to do so it would have been necessary to keep the patient continually narcotized and to take chances of interference with the circulation.

A diligent search of the literature for some kind of apparatus or dressing which would take care of the case in hand revealed the Velpau, Sayre and Dessault dressings, and a few modifications of these, as the only hope which could be offered the patient for the correction of his injury.

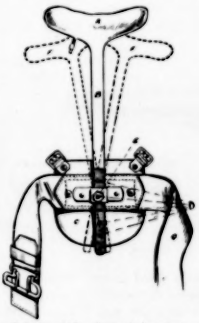

Fig. 1.—Side view of fracture crutch.

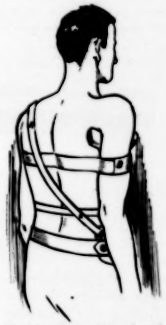

Fig. 2.—Rear view of patient with straps adjusted.

I constructed an apparatus which would perform the dual service of correcting the injury and alleviating the suffering.

The apparatus consists of a T shaped steel bar, on the horizontal or upper part of which rests a pneumatic tube covered over with chamois skin and which fits into the axilla (Fig. 1 *A*). The upright steel bar fits the side of the chest and extends downward to the hip (Fig. 1 *B*), where it is attached to an aluminum plate covered also with chamois skin and shaped to fit snugly over and rest on the hip. (Fig. 1 *C*). Holes placed equidistant in the upright bar (Fig. 1 *D*) render the apparatus adjustable to any adult. The bolt (Fig. 1 *E*) fastening the aluminum plate to the

upright bar may either be adjusted tightly so as to prevent mobility of the crutch with the forward and backward movement of the body, or fixed loosely so as to allow for such motion. (The latter seems preferable—note dotted lines *F, F*, Fig. 1). A belt (Fig. 1 *G*) fastened to the aluminum plate buckles around the waist; and straps extending from this plate over the opposite shoulder (Fig. 2 *A*) give additional security and comfort. A strip of adhesive tape 3 inches wide is placed round a pad (Fig. 2 *B*) over the arm on the injured side just below the axilla, the free end extending back under the opposite axilla and to the sternum in front.

With this apparatus we are enabled to meet all the requirements known as cardinal principles in treatment of fracture of the clavicle, namely, bringing the arm upward, outward and backward: (1) upward by means of the crutch resting on the hip; (2) outward by means of the pneumatic cushion in the axilla acting as a fulcrum, and (3) backward by the use of the adhesive strap around the arm and fastened to the back.

Fig. 3.—Front view of patient with straps adjusted.

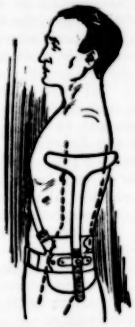

Fig. 4. — Fracture crutch strapped to patient.

ADVANTAGES OF THE CRUTCH SPLINT

1. Most important of all, it is comfortable, and free from the almost intolerable suffering caused by other dressings.
2. It can be used in many cases in which the Sayre or Velpeau dressings cannot be applied.
3. It can be used innumerable times.
4. It can be adjusted to any adult physique.
5. It is inexpensive.
6. It is easily applied and cannot be worked out of place by the patient as are the Sayre and Velpeau dressings, on account of their discomfort.
7. There is no chafing of the skin, the parts are open to inspection, and the apparatus can be easily removed and the injured parts massaged.
8. It allows free use of the forearm and hand.
9. It applies the proper mechanics, meets all the cardinal requirements, and affords perfect immobilization.

Atypical Meningitis in Denmark.—The *Hospitalstidende* publishes a notice from the state serum institute at Copenhagen to the effect that in the towns and rural districts of Denmark there have recently been cases of cerebrospinal meningitis in an atypical form: slight or no meningeal symptoms, high fever, mild catarrh and hemorrhages into the skin, either as petechiae or blue patches, some as large as one's palm. The disease thus simulates scurvy or typhus, but the meningococcus is responsible for it, as also for certain cases with an exanthem suggesting roseola. The institute urges that spinal fluid from all such cases be sent at once for examination, and asks for the data from all such cases that have been encountered, whether terminating in death or recovery.

BACILLUS WELCHII INFECTION AND INTOXICATION*

CARROLL G. BULL, M.D., AND IDA W. PRITCHETT, NEW YORK

The problem of gaseous gangrene in connection with shot and shell wounds has been only partially solved by improvements made in the antiseptic treatment of wounds. The essential nature of *Bacillus welchii* infection has not been established, and this lack of a certain basis of knowledge has hampered progress. Whether the bacilli are mere saprophytic concomitants of an infectious process induced and maintained by other pathogenic micro-organisms, as is held by Weinberg and Séguin, or whether tissue destruction is due to a mechanical action of the gas formed, as is held by Kenneth Taylor, or whether they possess invasive powers of their own, as others believe, has not been definitely settled. The indications are, however, that the bacilli tend not to invade the general blood stream and hence do not produce a septicemia to which the severe effects often noted in gas bacillus infection may be ascribed. It would appear, therefore, that a form of poisoning from local action of the bacilli arises; but it has yet to be shown that the bacilli of Welch are toxin-producing bacteria.

We have been able to establish this point. By cultivating the bacilli anaerobically in broth to which sterile, unheated skeletal muscle of the pigeon or rabbit has been added, a highly toxic fluid is obtained. The toxicity of the fluid is independent of acid and is not essentially influenced by filtration through porcelain which removes the bacilli. The degree of toxicity is also very high if the incubation has not been continued too long. For example, 0.25 c.c. of such a filtered fluid injected into the breast muscle of the pigeon produces intense edema and degeneration of the muscle, and death in a few hours. Corresponding lesions are also produced in the guinea-pig and rabbit. In other words, aside from actual gas formation, the essential lesions arising in *Bacillus welchii* infection in animals are reproducible with this toxic fluid.

The toxic substances are thermolabile. They have been distinguished into a hemolysin which destroys the red corpuscles and another poison not acting on the blood directly, but nevertheless lethal in effects.

If rabbits and other animals are immunized with the toxic filtrate, (*a*) active immunity is produced, and (*b*) an effective antitoxic serum is obtained. With the latter, infection with the bacilli and intoxication with the poison are preventable. The reaction between the immune serum (antitoxin) and toxin conform to the law of multiple proportion.

Our experiments lead us to place the pathogenic members of the *Bacillus welchii* group in the class of toxin-producing bacteria, and to ascribe to them invasive and poisonous properties of their own which are directly responsible for many of the severities observed in connection with the wound infections of the war. They also indicate that by suitable methods of preparation a protective and curative immune serum may be produced.

A detailed account of the experiments on which these statements are based will appear in a forthcoming number of the *Journal of Experimental Medicine*.

* From the Laboratories of The Rockefeller Institute for Medical Research.

Results of Tuberculosis Treatment at Home.—A report of the Association for Improving the Condition of the Poor of New York on the Home Hospital of the association has recently been issued covering a period of four years. The feature which this report particularly emphasizes is that by their plan many of the patients have been enabled to return to their work. The hospital has found that the care of children in homes where one or both of the parents are tuberculous constitutes one of its greatest problems. They find that nearly one third of the children in such families are afflicted with tuberculosis, while many more than one third are delicate or underweight. Of 140 adult patients who have been treated in the hospital for more than three months and who followed advice, only ten died and seventeen were reported as unimproved. In sixty cases the disease was definitely arrested, thirteen were reported improved, twenty-five as apparently arrested, and fifteen as quiescent.

Therapeutics

DISTURBANCES OF THE KIDNEYS

(Continued from page 1697)

TREATMENT OF PYELITIS

The diagnosis of these infections of the kidney can be determined only by the microscope, by staining the bacteria, and by cultures; which kidney, if not both, is involved must be determined by the physical examination, by the passage of the ureteral catheter, by roentgenograms and, if necessary, by pyelography. All primary infections or localized infections in other parts of the body must be discovered and removed, if possible.

Whatever the germ or germs may be that are causing the infection, the objects aimed at are: (1) good circulation in the kidneys; (2) prevention of absorption of toxins and germs from the intestine; (3) free drainage, and (4) modification of the character of the urine.

1. It is essential that the circulation in the involved kidney should be as perfect as possible; hence, if the kidney is displaced, it should be held in proper position. If the general circulation is poor, it should be improved by digitalis or by some other method. Ordinarily, it is not advisable for such a patient to remain in bed, as bed rest tends to increase the congestion of the kidneys; better drainage from the pelvis of the kidney is secured when the patient is up and about.

2. The bowels should be moved freely every day. Whether a saline laxative or a vegetable laxative should be used will be determined by the needs of the individual patient. The diet should be one which tends to cause the least intestinal fermentation. It may be advisable temporarily to change the diet radically from a mixed to a vegetable, or a milk diet. It may be well to give yeast or lactic acid bacilli.

3. To meet the third indication the patient should drink plenty of water to dilute the urine and to wash out more effectively any débris that may have been deposited in the pelvis of the kidney, whether bacteria alone, or pus, mucus and bacteria.

4. If the urine is very acid, especially if there is bladder irritability, it may be well to give an alkali for a short time, such as potassium citrate in 2 gm. doses; but this alkali should not be given over a long period of time, nor should the urine be allowed to be long alkaline, as most germs grow better in an alkaline medium. Sometimes much of the bacilluria disappears when the urine is made normally acid. Hence if the urine is alkaline in a bacilluria (which is generally not true when there is kidney pus), dilute hydrochloric acid should be given after meals. The dose need not be large — from 5 to 10 drops.

Perhaps the best germicidal treatment is hexamethylenamin, in a dose of 0.5 gm. (7½ grains) in water four times a day. It has been stated that to be antiseptic in the pelvis of the kidney the dose of hexamethylenamin must be much larger than this, but most persons tolerate a larger dose than the one named only for a short time. This drug may cause some bleeding from the kidneys, uretal pain and bladder irritation. When hexamethylenamin is prescribed, an alkali should not be given.

If this treatment, which is the best, does not succeed, or if for any reason hexamethylenamin disagrees with the patient, phenyl salicylate may be given in 0.25 gm. doses, in capsule form, four times a day. This is sometimes successful in mild cases of bacilluria. Santal oil has also been used.

This treatment is frequently successful in more or less permanently curing a bacilluria; at times it is used with success in treating a mild purulent infection of the pelvis; and it is also possible to evacuate and heal a small abscess of a kidney in this manner.

On the other hand, most purulent kidneys are difficult to treat. Both stock and autogenous vaccines have been used with varying success; perhaps the most usual result is failure.

A more radical treatment is to wash out the pelvis of the kidney through the ureteral catheter with boric acid or a silver solution.

Geraghty[127] finds that in simple pyelitis renal pelvis lavage is of great value, and he uses either a silver nitrate solution or a weak solution of formaldehyd. He injects into the kidney pelvis from 5 to 10 c.c. of a 0.5 per cent. silver nitrate solution, and passes the catheter only a short distance into the ureter for the purpose of treating a coincident ureteritis at the same time. The strength of the injection is gradually increased until it has reached 5 per cent. The increase is gradual to obtain tolerance.

It can be readily understood how frequently little pockets of pus — which may be discovered by pyelography — may be located in the kidney tissue around the pelvis. When such small abscesses are present, even with injections, the cure may be slow and imperfect, and they may readily recur.

Geraghty believes that when there is considerable pelvic dilatation, pelvic lavage is of little value. He has also advantageously used formaldehyd solution, from 1 part to 5,000 parts of water, to 1 part to 2,000 parts of water.

Kretschmer and Gaarde[128] believe that many cases of pyelitis in adults, especially when it occurs during pregnancy, represent exacerbations of a pyelitis of infancy which has remained latent for years. They believe that chronic colon pyelitis which has resisted medicinal treatment is best treated by pelvic lavage with a 1 per cent. solution of silver nitrate; they reject the stronger solutions suggested by Geraghty. If there is much pus in the pelvis of the kidney they wash it out first with a weak boric acid solution. They use, on an average, from 5 to 7 c.c. of a 1 per cent. silver nitrate solution, and repeat the injections at five or six day intervals until the urine is sterile and free from pus. The number of injections required in each case in the fourteen cases of pelvic lavage summarized varied from one to eight. In these fourteen cases they reported eleven cures, as proved by negative cultures. All injections must be given slowly, and actual distention of the pelvis avoided.

Murphy[129] believed that though vaccines often fail, they are frequently of great value in genito-urinary infections. He condemned their indiscriminate use, however, as in obstructive pyelitis, but advised the use of vaccines in infection with free drainage when the condition of the patient was satisfactory. He recommended caution in dosage, and began with 100 million dead bacteria as the first dose, increasing this

127. Geraghty, J. T.: The Treatment of Chronic Pyelitis, The Journal A. M. A., Dec. 19, 1914, p. 2211.

128. Kretschmer, H. L., and Gaarde, F. W.: The Treatment of Chronic Colon Bacillus Pyelitis by Pelvic Lavage, The Journal A. M. A., June 24, 1916, p. 2052.

129. Murphy, J. B.: Interstate Med. Jour., November, 1914, p. 1214.

number rapidly until there was a reaction. He stopped the treatment from three to eight days and then gave the same or a slightly increased dose, according to the previous reaction. A severe headache or a temperature of 102 indicates a smaller dose, and the largest dose should not exceed 30 billion bacteria. The injections should be given deep into the muscles, and slowly. When more than 10 billions are given at once they should be injected at two or three separate points. Of course smaller doses may be given intravenously. A severe local reaction should not alarm, although these injections may cause necrosis of tissue.

Murphy obtained the best results in colon bacillus infections. He believed that if the infection of the kidney came by way of the blood, the trouble would be in the parenchyma of the kidney and the microscopic examination of the urine might suggest the depth of the location of the infection in the kidney substance by the character of the epithelial cells. If an infection reached the kidney from below by way of a dammed back urine, the pelvis would of course be infected first. He also recognized the lymphatic route of infection from the pelvis or other parts of the abdomen.

If an autogenous vaccine cannot be produced from the infecting bacteria in the urine or from some localized infection, like that of the prostate, it may be isolated from the blood serum or from an infection in some other part of the body, if such causative localized infection is present. The tonsils, the sinuses adjacent to the nose, and the gums and teeth should be studied for possible sources of infection.

While the most frequent germ of infection is the colon bacillus, the staphylococcus, the streptococcus and the gonococcus are also not infrequent infective agents. Ramsey[130] found that in 100 cases of infection, ninety were caused by the colon bacillus.

If a purulent kidney does not improve rapidly, if the patient is becoming debilitated, or if the kidney is found enlarged and examination of the urine from this kidney shows that the kidney structure is diseased, temporizing should cease, and the kidney should be removed, unless the other kidney is so diseased as to render the operative danger very great.

(To be continued)

130. Ramsey: St. Paul Med. Jour., 1914, **16**, 343.

Mortality from Cancer.—The Bureau of the Census has just issued a monograph compiling and analyzing, under twenty-nine separate headings, deaths from cancer in the registration area of the United States in 1914. The total number of deaths for that year, from cancer and other malignant tumors, in the registration area was 52,420, the estimated population of this area being 66.8 per cent. of the total population. As a result of investigation of the reports as originally made to the bureau, the diagnosis of cancer was determined to be reasonably certain in 30,555 instances, or 58.3 per cent. of the total; 14,404, or 27.5 per cent., were regarded as uncertain, and in 7,461, or 14.2 per cent., the diagnosis was classified as unknown. It is on this basis that the analysis of the cases was made. The increase in cancer in the United States is indicated by the mortality figures taken from the registration area as it existed in the several years mentioned, as follows: 1906, 29,020, a rate of 69.1 per hundred thousand of population; 1907, 30,514, rate 70.9; 1908, 33,465, a rate of 71.5; 1909, 37,562, a rate of 73.8; 1910, 41,039, a rate of 76.2; 1911, 44,024, a rate of 74.3; 1912, 46,531, a rate of 77.0; 1913, 49,928, a rate of 78.9; 1914, 52,420, a rate of 79.4. Of the deaths in 1914, it is said that 19,889, or 37.9 per cent., were due to cancer of the stomach and liver, and 8,152, or 15.6 per cent., to cancer and other malignant tumors of the female genital organs.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, SECRETARY.

THORIUM NITRATE.—Thorii Nitras.—$Th(NO_3)_4 + 4H_2O$.—The thorium salt of nitric acid.

Actions and Uses.—The soluble thorium salts bear a close resemblance to alum in their local astringent and irritant properties. They are not absorbed from the alimentary canal. Hypodermically, they cause local sloughing, and intravenously, they kill by coagulating the blood. The nonprecipitant double salts are practically nontoxic, even intravenously. They are excreted by the kidneys. Thorium salts are fairly radioactive. They have been recommended for local application in malignant diseases, and thorium emanation has been inhaled in phthisis. Reliable evidence as to other therapeutic uses of thorium salts is lacking.

Thorium nitrate occurs as white crystalline granules or lumps. Very soluble in water and alcohol. On calcination it yields a voluminous, white oxide, which should amount to from 48 to 50 per cent. of the original salt. The aqueous solution dries over sulphuric acid to a crystalline mass.

An aqueous solution gives a white precipitate with ammonium carbonate, the precipitate being completely soluble in an excess of the precipitant. The aqueous solution gives with caustic alkalies a voluminous precipitate of the hydroxide insoluble in an excess of the precipitant. The presence of tartaric or citric acids prevents the precipitation. Potassium ferrocyanide produces an amorphous precipitate.

THORIUM SODIUM CITRATE SOLUTION.—Prepared by dissolving thorium nitrate, 10 Gm., and sodium citrate, 15 Gm., in water to make 100 Cc.

Actions and Uses.—The citrate of thorium and sodium is opaque to the Roentgen rays. It is used especially in the diagnosis of diseases of the renal pelvis and urinary bladder.

Dosage.—This solution is employed chiefly for cystograms. It should be sterilized by boiling before use.

According to the method of J. E. Burns (THE JOURNAL, June 26, 1915, p. 2126) to make 100 Cc. of the solution, 10 Gm. of thorium nitrate are dissolved in as little distilled water as possible; to this solution, kept hot on a water or steam bath, are added 30 Cc. of a 50 per cent. solution of sodium citrate, the additions being made in small quantities and care being taken to shake the solution thoroughly after each addition. This solution is then made neutral to litmus by the careful addition of a normal solution of sodium hydroxide, and made up to 100 Cc. with distilled water. On filtration, a clear, limpid solution is obtained, which, when sterilized, either by boiling or steam under pressure, is ready for use.

Thorium Solution for Pyelography, H. W. & D., 10 per cent.—This solution has the composition and is prepared according to the method given for thorium sodium citrate solution.

Prepared by Hynson, Westcott and Dunning, Baltimore. No U. S. patents or trademarks.

STRONGER THORIUM SODIUM CITRATE SOLUTION.—Prepared by dissolving thorium nitrate, 15 Gm., and sodium citrate, 22.5 Gm., in water to make 100 Cc.

Action and Uses.—The double citrate of thorium and sodium is opaque to the Roentgen rays. It is used especially in the diagnosis of diseases of the renal pelvis and urinary bladder.

Dosage.—This solution is employed chiefly for ureteropyelograms. It should be sterilized by boiling before use.

According to the method of J. E. Burns (THE JOURNAL, June 26, 1915, p. 2126) to make 100 Cc. of the solution, 15 Gm. of thorium nitrate are dissolved in as little distilled water as possible; to this solution, kept hot on a water or steam bath, are added 45 Cc. of a 50 per cent. solution of sodium citrate, the additions being made in small quantities and care being taken to shake the solution thoroughly after each addition. This solution is then made neutral to litmus by the careful addition of a normal solution of sodium hydroxide, and made up to 100 Cc. with distilled water. On filtration, a clear, limpid solution is obtained, which, when sterilized, either by boiling or steam under pressure, is ready for use.

Thorium Solution for Pyelography, H. W. & D., 15 per cent.—This solution has the composition and is prepared according to the method given for stronger thorium sodium citrate solution.

Prepared by Hynson, Westcott and Dunning, Baltimore. No U. S. patents or trademarks.

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SATURDAY, JUNE 16, 1917

THE EXPERIMENTAL PRODUCTION OF CANCER

It has long been evident that many questions concerning the etiology of cancer would not be answered until this disease could be produced experimentally at will. This accomplishment would make possible the study of the development of the growth step by step, the determination of the factors necessary to incite malignant proliferation, and, evidently, the simultaneous exclusion of unessential or unimportant possible factors. In view of the importance of the subject, it would seem that surprisingly little systematic attempt has been made to accomplish the experimental production of cancer, as far as the literature shows; but it is probable that many more or less extensive experiments have been attempted that have never been reported because of the failure to accomplish their object. Of late years, experimental cancer research has concerned itself chiefly with the transplantable tumors, especially of mice, rats and fowls, but always with the recognition that this was quite a different thing from the production of a spontaneous tumor in an animal through malignant transformation of its own cells. Transplanted tumors have afforded much information concerning the general biology of cancer; but this information bears only indirectly on the solution of the etiology of cancer.

Among the recorded attempts to produce cancer in animals, perhaps the work of Bernhard Fischer is best known. Fischer obtained marked epithelial overgrowth and invasion of the subepithelial tissues with epithelial cells in response to the stimulation produced by fat-soluble dyes, notably scarlet red. But although this overgrowth often resembled carcinoma in its general histologic features, true cancer was never produced, for the growth stopped spontaneously when the effect of the dye was exhausted, and did not progress or produce metastasis as a true cancer should. More recently Fibiger[1] obtained actual carcinomatous growths in the stomachs of rats that had eaten roaches infected with a parasite (*Spiroptera*) which grows in the rat's stomach and stimulates the growth of the epithelial lining. Fibiger has reported producing six definitely carcinomatous growths among many simple papillary hyperplasias, and of these, four produced metastases. This set of observations parallels the production of cancer in the urinary bladder as a result of infection with *Bilharzia* in man. It may be fairly called the first successful series of experiments leading to the intentional production of cancer; but it leaves much to be desired as a method of research, largely because the exciting agent is not capable of exact control. The experimenter can merely feed infected roaches to rats, but the degree of infection of the rats, its site, and the presence of other factors that may influence the process are entirely beyond his control.

In human pathology we have certain forms of irritating or stimulating agents that experience has taught are peculiarly likely to incite cell proliferation that terminates in malignant growth. Most conspicuous of these are the Roentgen rays, which have had many victims of skin cancer; yet, as far as we know no one has produced cancer intentionally in animals by the use of this agent. Certain types of chemicals also have a similar effect in man, notably tar, pitch, paraffin, soot, and certain anilin dyes. By taking advantage of this property of tar, Yamigawa and Ichikawa[2] in the University of Tokyo have now succeeded in causing the production of marked epithelial overgrowth in the ears of rabbits with great regularity, and often the formation of true squamous cell cancers. The method of procedure consisted simply in painting coal tar on the inner surface of the ear every two or three days for from fifty to 400 days. This stimulates the epithelium, especially of the hair follicles, and hornified retention cysts are formed. After from thirty to sixty days there appear minute nodules that consist of growths derived from the hair follicle epithelium, which may take either a polypoid or a verrucose form; and some of the latter growths develop to cutaneous horns if the application of tar is stopped. The verrucose growths, under continued stimulation, may assume an infiltrative character, invading even the ear cartilage, growing into the lymphatics and veins, and in two instances at least in this series, producing metastases in the regional lymph glands. In other words, these growths recapitulate in all essential respects the ordinary skin cancers arising in the human skin as a result of protracted stimulation, whether from light, mechanical or chemical irritation. The Japanese investigators have made possible the production of cancer at will in experimental animals, and thus extend greatly the possibilities of cancer research.

The bearing of their observations on the question of the infectious etiology of cancer is interesting and important. Although untold thousands of rabbits have

1. Fibiger, J.: Ztschr. f. Krebsforsch., 1914, **14**, 295.

2. Yamigawa, Katsusaburo, and Ichikawa, Koichi: Experimentelle Studie über die Pathogenese der Epithelialgeschwülste, Mitt. med. Fak. d. k. Univ. Tokyo, 1915, **15**, 295-344; 1917, **17**, 19-67; Japan. Ztschr. f. Krebsforsch., 1916, **10**, No. 4.

been observed in laboratories, no case of spontaneous tumor of the ear in rabbits seems ever to have been reported; in fact, rabbits are less subject to tumors of any sort than almost any other domestic animal. Nevertheless the opportunity for a cancer parasite, if such there is, to obtain entrance to the tissues of the rabbit's ear are unsurpassed, between the common use of metal tags in the ears for identification, of notching the ears for the same purpose, and needle punctures for bleeding or inoculation, to say nothing of the universal use of the rabbit's ears as a convenient handle. In contrast to the complete exemption of the rabbit's ear to cancer in spite of these opportunities for infection, we find that deliberate stimulation of epithelial growth by a chemical mixture of considerable bactericidal strength leads regularly to a hyperplasia of epithelium which commonly assumes a neoplastic character, often malignant. The least one can say is that these experimental cancers add one more to the numerous features of cancer growth that are extremely difficult to ascribe to an infection, and readily explained as the result of protracted, nonspecific stimulation of cell multiplication.

THE LIFE OF THE RED BLOOD CORPUSCLES AND "BILE CIRCULATION"

It is generally accepted that the red blood cells of the body have a comparatively brief existence. These corpuscles are believed to be disintegrated somewhere in the circulation. When the evidence for this widely taught belief is carefully examined, however, it appears to be extremely indirect and circumstantial in character. The fact that the mammalian erythrocyte is assumed to be a cell which has lost its nucleus has been cited in favor of the probability of a brief survival for the denucleated structure.[1] The experiment has been made to determine the length of time during which foreign corpuscles, such as those of birds, can be recognized after injection into the circulation of a mammal. Such a method of investigation has properly been designated as beside the mark, because these foreign cells will be destroyed by the serum and rapidly taken up, like other foreign particles, by the phagocytes of the body. Nevertheless the destruction of red blood cells sooner or later is presaged by the fact that these are often found engulfed in large cells of various tissues and organs, such as the spleen and hemolymph glands, so that pigment granules supposedly obtained from the disintegration of the red corpuscles can often be recognized.

A further widely accepted belief looks on free hemoglobin, the characteristic constituent of the red blood cells, as the mother substance from which the bile pigments are generated. The latter are thus looked on as the most significant derivatives of the blood pigment. The chief place of disintegration of the hemoglobin has been assigned to the liver, the organ in which the pigmentary residue is supposed to be converted into bile pigment. Injection of hemoglobin into the circulation is reported to lead to an augmentation of bile pigment in the secretion from the liver. The administration of hemolytic poisons, such as phosphorus, arseniuretted hydrogen, and toluylendiamin, results in an icterus which has been argued to be hepatogenous, rather than hematogenous in character. The biliary passages, so the assumption goes, are unable to eliminate the undue amounts of bile pigments produced in the liver from the excess of liberated hemoglobin, so that there is an abnormal reversed discharge of the bile pigment back into the blood. Further, it has been stated that injected bilirubin is promptly excreted into the bile as well as by the kidneys.

Although no one actually knows just when and how red corpuscles go to pieces, the assumption that their pigment ultimately appears in the bile in the new guise of bile pigment has enabled a calculation of the probable life of the corpuscles to be made. An element of obvious error creeps in owing to the uncertainty as to the actual amount of end-product, that is, bile pigment, formed and excreted daily. Nevertheless the estimates made have placed the amount of hemoglobin disintegrated daily at one tenth of the total present in the body. The total life of the red corpuscle, on this hypothesis, cannot exceed ten days.[2]

The fundamental basis for all of the foregoing conclusions regarding the short cycle of the red blood corpuscles, let us reiterate, is the assumption that the bile pigments are formed from hemoglobin. If there is a suspicion, to quote Hooper and Whipple,[3] that other substances than hemoglobin may be formed into these end-products or that some of the used up hemoglobin may not be formed into this end-product, we may also question the life cycle of the red cell as determined in this manner. At least we may say that there is a possibility of error, and assume that the life of a red cell may be normally more than from ten to fourteen days. Whipple and Hooper,[4] in an elaborate series of investigations on dogs with biliary fistulas, have found that blood feeding has no influence on the secretion of bile pigment in the normal dog. Whole blood of the sheep, pig or ox, freshly defibrinated, given to the dog by stomach tube does not influence the output of bile pigments or the volume of bile. Freshly laked dog red cells given by stomach tube likewise have no effect on bile secretion. Cooked pig blood and digested ox blood have not the slightest influence on the output of bile pigments. There is no immediate effect nor any delayed influence on the bile

1. The debatability of part of this hypothesis has already been referred to (The Origin of Red Blood Corpuscles, editorial, THE JOURNAL A. M. A., June 2, 1917, p. 1629.

2. Howell, W. H.: Textbook of Physiology, 1913, p. 430.

3. Hooper, C. W., and Whipple, G. H.: Bile Pigment Metabolism, IV, Influence of Fresh Bile Feeding upon Whole Bile and Bile Pigment Secretion, Am. Jour. Physiol., 1917, **42**, 264.

4. Whipple, G. H., and Hooper, C. W.: Bile Pigment Metabolism, III, Bile Pigment Output and Blood Feeding, Am. Jour. Physiol., 1917, **42**, 256.

secretion. It seems safe to assume that during the period of observation a certain amount of this material was digested, and its constituent parts taken in through the intestinal mucosa. Splenectomy has no effect on these blood feeding experiments.

The skepticism regarding the direct interrelation between blood pigment and bile pigment thus raised by these investigations is augmented by other unexpected findings. To one who has been trained to accept the "circulation of the bile," by which is meant reabsorption from the intestine and reexcretion by the liver, it will come as a surprise that these experiments afford no evidence of this. Feeding fresh bile usually causes a fall in the output of bile pigments in spite of the cholagogue action. Pig bile, as a rule, is most active in this respect, and may depress the bile pigment curve to less than half normal. Ox and sheep bile may have the same effect. Dog bile often causes only a slight fall in bile pigment output, but may depress the curve to 50 per cent. of normal.

Addis[5] has suggested as an outline of the life history of the blood pigment that the hemoglobin is changed in the liver to bile pigments, and excreted into the intestine. The bile pigment is reduced to urobilinogen in the intestine, a part escaping in the feces, and an important part being absorbed into the blood, polymerized into urobilin-complex, and taken up by the liver. This portion is stored in the liver or synthesized into hemoglobin, or, if the liver is abnormal, may escape into the blood and appear in the urine as urobilinogen. This hypothesis, in a word, is "bile circulation" again presented in a more elaborate form — a circulation of a pyrrol complex. Hooper and Whipple[6] believe, however, that their observations exclude the possibility of bile pigment absorption from the intestine. There is no evidence to support the theory of "bile pigment circulation." Their latest experiments give no support to Addis' theory of pigment conservation, urobilinogen absorption from the intestine and synthesis toward hemoglobin. It is suggested that urobilinogen may be formed in other body tissues rather than absorbed from the intestine.

The negative findings respecting the influence of either blood feeding or bile feeding in the direction of increasing the output of bile pigments from the liver are presumably attributable, if correct, to more careful methods of observation than have heretofore been employed. They must not be interpreted to mean that the production of bile pigments is an utterly undeterminable factor. It now seems probable that the liver has some constructive ability in pigment formation which can be modified by diet. According to Whipple and Hooper,[6] carbohydrates stimulate the excretion of bile pigments in bile fistula dogs. Intravenous injections of dextrose act in the same way as a large dose of sugar by mouth, whereas a meat diet will lead to a depression of the average bile pigment elimination found on a healthy diet. Here are further contentions which tend to upset many cherished beliefs.

5. Addis, Thomas: A Working Hypothesis of Hemoglobin Pigment Metabolism, Arch. Int. Med., March, 1915, p. 413.
6. Whipple, G. H., and Hooper, C. W.: Bile Pigment Metabolism, II, Bile Pigment Output Influenced by Diet, Am. Jour. Physiol., 1916, **40**, 349.

THE NEPHRITIS PRODUCED BY OXALIC ACID

Comparisons recently made of the relative behavior of a number of organic acids — oxalic, tartaric, citric and malic acids — in the body[1] have suggested that the variations in toxicity and other features of physiologic deportment are doubtless associated in some degree with the comparative readiness with which they are destroyed in the organism. Nevertheless the differences shown by compounds having many features of resemblance in respect to chemical structure or physicochemical behavior are often so inexplicable as to demand specific consideration for each substance in place of the more general attempt at interpretation in a distinctly systematic plan. Thus it has been found that whereas administration of tartaric acid in an experimental way may give rise to a marked nephritis, even considerable amounts of malic acid salts do not give rise to such untoward results.

Oxalic acid has many properties in common with tartaric acid. Oxalate solutions precipitate calcium from its salts. Since it is well known that calcium is an essential component of living protoplasm, the suggestion has frequently been made that the oxalates exert their baneful influence in the body not through any direct toxic action on the protoplasm, but rather by precipitating its constituent calcium and thus altering the normal integrity of cellular constituents. In support of this is the fact that administration of calcium salts will often restore the damage done by oxalates in the body. Of course such beneficial effects may be due merely to the removal of harmful oxalates by precipitation in the tissues rather than to the actual supply of desired lime. The interpretation is still somewhat problematic.

In explaining the genesis of tartrate nephritis, Umeda and Ringer[2] have pointed out that tartaric acid does not readily pass through the animal membranes or cells. This is known from the fact that the salts of tartaric acid, when given by mouth, are but slightly absorbed, and act as cathartics. They reasoned that, since the kidney cells are more permeable to salts than are the ordinary cells of the body, and since tartaric acid forms a salt with calcium which has a low degree of solubility, the tartaric acid, while passing through the kidney cells, in all probability combines with the calcium salts of the kidney cells, forming an insoluble calcium tartrate, which becomes precipitated in the

1. The Behavior of Three Organic Acids in the Body, editorial, THE JOURNAL A. M. A., March 31, 1917, p. 984.
2. Umeda, N., and Ringer, A. I.: Studies in Experimental Nephritis, Proc. Soc. Exper. Biol. and Med., 1916, **14**, 33.

body of the cell and thus causes the complete destruction of the cell.

If this argument is tenable, the administration of oxalic acid also should be followed by an impairment of the kidney tissues. It has long been recognized that most of the oxalate ingested appears in the urine in the form of calcium oxalate. Insoluble crystals of the latter are often deposited along the urinary tubules and may stop them up so as to cause anuria, congestion and inflammation of the kidney. Small oxalate calculi with these renal changes have sometimes been the only indications of lesions found at postmortem examinations in oxalate poisoning. But Umeda and Ringer have now studied more carefully the minute histology of the kidney in fatal cases of experimental administration of potassium oxalate. From their observations it appears that oxalic acid in small quantities produces nephritis similar to that of tartaric acid. From this it is concluded as reasonable that tartaric acid and oxalic acid exert their influence on the kidney tubules by precipitating the calcium salts in the cells, during the process of their excretion.

EFFECTS OF OCCLUSION OF BLOOD VESSELS IN MAN

Studies on animals have shown that the blood pressure may be changed either by alteration of the peripheral resistance, that is, the ease with which blood can escape from the arterial to the venous side of the circulation, or by modifying the output of the heart. Every constriction of the smaller branches of the arterial system results not only in an increase in the peripheral resistance but also in a diminished capacity of the entire blood system. Consequently the arterial pressure is raised at the same time as the mean systemic pressure. Such a change nearly always associates with it some corresponding alteration in the heart beat also; several factors, therefore, may cooperate in the production of a rise or fall of blood pressure.

Investigation of the effects of occlusion of blood vessels on the general blood pressure has now been extended to man by Elliott,[1] at the Physiologic Department of the Washington University, St. Louis. The principal method consisted in applying different known pressures to the vessels of both thighs while following the arterial pressure in the brachial artery by the continuous oscillatory method. It was found that circular compression of the thighs causes a rise in blood pressure, larger and more immediate at the higher than at the lower compressions. This is due to the increase in arterial resistance, modified somewhat at the lower compression pressures by the venous effect. The heart rate is somewhat slowed. Decompression of the thighs causes a fall in blood pressure, more immediate and more profound than the rise due to compression. This effect is likewise more marked at the higher compression pressures, and is modified slightly by the venous accumulation in the legs. The heart rate is somewhat accelerated. The removal from the circulation of man of 64 c.c. of blood does not change appreciably the arterial pressure. A slight external pressure, even less than the diastolic pressure, on an artery may under certain circumstances materially diminish the flow through it. There was no evidence that compression of an arm, as in making blood determinations on man with the aid of a sphygmomanometer cuff, produces any essential effect on general blood pressure.

The results here recorded indicate the accord of the hemodynamic phenomena in experimental animals and man so far as the occlusion of blood vessels is concerned. They have been further substantiated by Elliott's observations in a case of femoral arteriovenous aneurysm whereby a communication existed between the femoral artery and vein. This connection could be interrupted by pressure with the fingers over the site. Closure produced a tremendous rise of blood pressure and a slowing of the pulse rate. Opening the communication caused a fall in blood pressure and an acceleration of the heart, and restored the original conditions. It is evident, Elliott remarks, that in closing the communication we are shutting off the easy path of the blood into the veins and hence back to the heart, thus relieving the heart and indeed the entire venous system of an abnormally high pressure. At the same time the peripheral resistance is greatly increased. Opening the communication, of course, has the opposite effects. It seems fair to conclude that the changes in blood pressure here observed must be due to the changes in arterial resistance, as there seems to be no reason for believing that reducing the venous pressure and, for a time at least, the volume of blood supplied to the heart would cause the arterial pressure to rise. The slowing of the heart rate observed on closing the arteriovenous opening was probably due to stimulation of the vagus center by the increased pressure. In any event, the facts observed in this patient are in accord with the familiar observations of a slowing of the heart beat induced by high blood pressure — a variation long believed to be due to a stimulation of the cardiac nerves.

1. Elliott, B. L.: Observations on the Effects of Partial and Complete Occlusion of Blood Vessels on the General Blood Pressure in Man, Am. Jour. Physiol., 1917, **42**, 290.

Antenatal Influence.—Antenatal influence has been in the past the unknown quantity, so little suspected that to some it has been the imaginary quantity, which has set its mark on health and disease after birth, mystifying the clinician, complicating his diagnosis, falsifying his prognosis, and disappointing his treatment. It was always present, sometimes acting benignly as a kind of physiologic mascot handed down from a clean-living parent, at other times coming more prominently into action as a malign weapon of degeneration forged by a father or a mother without what may be termed a racial conscience. At all times it confused the issue, introducing an uncertainty into the course of events which more than anything else kept the teachable physician humble, and confounded the most confident expectations of the arrogant and proud practitioner.—J. W. Ballantyne, M.D., F.R.C.P.E., *Edinburgh Med. Jour.*, May, 1917.

Current Comment

JUSTICE TO THE PHARMACIST

The letter in the Correspondence department of this issue from Mr. John W. England, secretary of the council of the American Pharmaceutical Association, calls attention to an anomalous state of affairs. Physicians, dentists and veterinarians are officially recognized by the government as men of special training, whose technical knowledge can be of use to the nation in time of war. Provision is made so that men in these three professions can be enrolled as commissioned officers and their skill thus most efficiently used by the Army. The pharmacist, however — as a pharmacist — is utterly ignored. If he enlists he does so as a private. So far as official recognition of it is concerned, the science and art of pharmacy might not exist for the Army. Today, as never before, victory in war goes to the nation that most effectively conserves the health of its fighting men. The physician is now of such military importance that the medical profession will be called on to make no inconsiderable sacrifices. It will materially lighten the arduous duties and responsibilities of the physician to have in the Army trained pharmacists who will be able to give intelligent cooperation. But it is imposing too great a strain on the patriotism of those whose special knowledge is obviously a large asset to the Army, to expect them to enlist as privates without any recognition of their national worth. Pharmacists should be given a rank commensurate with their importance, first because it is but simple justice to the pharmacists themselves, secondly, because the usefulness of the medical corps will be greatly augmented and, lastly, and most important, because the efficiency of our Army demands it.

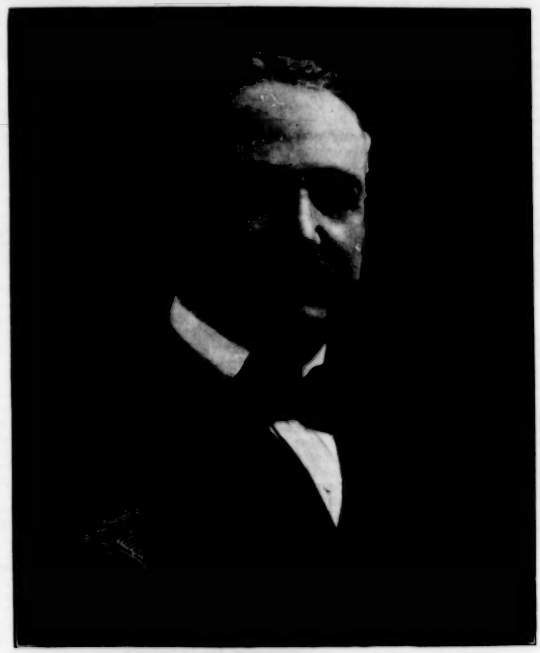
THE NEW YORK SESSION

Notwithstanding the war, the 1917 Annual Session held in New York last week was a success. The registration, 5,147, makes it second only to the Chicago session of 1908, at which the attendance was 6,466. The new features of this session were that Monday and Tuesday were devoted to the meetings of the House of Delegates, which was presided over by a chairman of its own election, leaving the President of the Association free to meet the many appointments which command his time during the session. With these two days at its command, the House transacted the major portion of its work before the opening of the Scientific Assembly so that the delegates were privileged to attend the scientific meetings not only to their pleasure and benefit, but also to the advantage of the scientific program. The Scientific Assembly opened with the general meeting, as usual, but this was held on Tuesday evening instead of during the morning of the first day of the Assembly. The success of this meeting in New York proved the wisdom of this change in the program for the week's convention. Reports from all the sections show that the attendance was good, the papers excellent and the discussions interesting. The arrangements for housing the sections provided for their close grouping; they were located in five of the larger hotels and the building of the New York Academy of Medicine. The greatest distance between these meeting halls was ten or eleven blocks, and in certain of the hotels there were from two to four Sections. This made the Sections quite accessible one to the other, and undoubtedly accounts for the large attendance at the various meetings. The New York physicians, especially those of greater New York City, hospitably received the Fellows and their guests. A notable feature provided by the local profession was an extensive series of clinics given during Monday and Tuesday. The large registration during these two days — 3,783 — shows the interest taken. Instead of the reception which is usually tendered to the President of the Association, a patriotic rally was held on Thursday evening in the Hippodrome, a full report of which appears in this issue. In addition, on Wednesday evening, meetings were held both in the grand ballroom of the Waldorf-Astoria and in the north ballroom of the Hotel Astor, at which there were presented questions relative to the medical conduct of the war. Many of the papers and the discussions in the Sections, as well as the address of the President, evidenced the intense interest of the medical profession in the nation's crisis.

UNDERLYING PRINCIPLES OF WORKMEN'S COMPENSATION LAWS

A report recently issued by the National Industrial Conference Board of "Workmen's Compensation Acts in the United States" again calls attention to some of the underlying principles of this form of legislation, which has developed so rapidly in the last eight years. While the laws themselves have aroused a considerable degree of opposition, especially among physicians, the criticisms have been largely aimed at administrative details rather than at the underlying principles on which such legislation is based. In order to keep these principles clearly in mind, it is desirable that they should be reiterated and emphasized at frequent intervals. For this reason, the report of the conference board is of interest and value. In the report, the vital principle of workmen's compensation laws is clearly set forth, namely, "the substitution of a definite and certain measure of relief for the former uncertainties of redress through litigation." Under the old system whereby each claim had to be settled as a separate lawsuit and in which the principles of the old English common law, complicated by the legal theories of contributory negligence, fellow servants' responsibility and voluntary assumption of risk, the chances of injured employees ultimately receiving any fair compensation for their injuries were slight. Even when the plaintiff received a considerable award at the hands of the jury, the greater part of it was consumed in legal expenses. Under the workmen's compensation laws, a limited but certain wage payment is made promptly to injured employees, regardless of the question of responsibility or fault. Under the old

system it was necessary to prove who was at fault for each industrial accident. Under the new method the question of fault is ignored, industrial accidents being regarded as necessary incidentals to industrial activity, and those suffering from them being regarded as entitled to compensation as a public necessity rather than as the redressing of a private wrong. The fact that, in the past eight years, thirty-seven states and four territories have adopted such laws, and that the federal government has passed a compensation act for its employees, is abundant evidence of the advantages of the new method over the old. The principles of workmen's compensation now apply to more than two thirds of the wage earners in the United States. The medical profession has been slow to realize the significance and importance of such laws, and in most of the states allowed them to be enacted without paying attention to the terms of service or compensation provided for physicians. As a result, when the laws were put into operation, their provisions were found to be extremely unsatisfactory. It is now necessary in each state to remedy these defects and write into the laws in the form of amendments the provisions which should have gone into the original draft. The inequity of the medical provisions in most of these laws, however, should not blind physicians to the fact that the underlying principles of workmen's compensation laws are essentially sound and are a marked advance over previously existing conditions. Amendments securing to physicians their proper rights and privileges should without question be adopted, but it is not necessary to burn down the house in order to kill the rats. A clear distinction should be made between the essential and fundamental principles of workmen's compensation legislation and the secondary details of administration which can and should be modified in any case in which they work a hardship on any class connected with the administration or operation of the law.



PRESIDENT-ELECT ARTHUR DEAN BEVAN

THE PRESIDENT-ELECT

The medical profession will view with the highest degree of pleasure and satisfaction the recent selection of Dr. Arthur Dean Bevan as President-elect of the American Medical Association. Nor has that highest honor of the Association ever been bestowed on one more worthy to receive it. Dr. Bevan is 56 years old; graduated from Rush Medical College in 1883; was an officer in the United States Marine Hospital Service and professor of anatomy at the Medical Department of the University of Oregon until 1887. He was then elected to the chair of anatomy in Rush Medical College, which position he held until 1899, when he was made associate professor of surgery. In 1902 he was made full professor and head of the department of surgery, which position he still holds. He was a member of the House of Delegates of the American Medical Association in 1902 and chairman of the Section on Surgery in 1906. As a member of the House of Delegates he was made chairman of the Committee on Medical Education which, a year later, recommended the establishing of a permanent council in place of the temporary committees which had previously attempted to bring about improvements in medical education. When the Council was established in 1904 Dr. Bevan was made its chairman, which position he has held since that time. It was through his high ideals and the force of his personality, together with his straightforwardness and sense of fairness, that many of the measures of the Council were carried through to a successful conclusion. The improvements in medical education since the creation of the Council on Medical Education are too well known to need further comment here. It is sufficient to say that there has been no work undertaken by the Association of more vital importance to the medical profession and the public than that which has been accomplished by this Council which, from its beginning, has been so ably directed by Dr. Bevan.

Medical Mobilization and the War

Camps of Instruction for Medical Officers

The following outline of the course of instruction for medical reserve officers is taken from an article in the *Military Surgeon*, by Col. E. L. Munson, M. C., U. S. Army, who was recently appointed head of the division of medical military instruction:

The object of the proposed training is to supply the knowledge which will enable the new officer not alone to work under the direction of more experienced officers, for we have not a sufficient number of such, even to direct, but to perform their duties independently; to, in their turn, supervise others and transmit their knowledge to their subordinates, both commissioned and enlisted. There is an ancient service adage to the effect that good officers can always make good soldiers. The converse of this does not hold true. So we must start with good officers if we are to be efficient.

As all our officers necessarily have the essential medical foundation and are professionally competent, no instruction need be given in purely professional matters. Moreover, the training must be practical, and only so much theoretical instruction given as is necessary to elucidate the subject. There will, of course, be lectures on special subjects, map problems, war games, demonstrations, etc.

It will not be practicable to send all of the newly commissioned medical officers to the designated camps of instruction; not a few of them must at once be assigned to service with troops, who will require their professional services, irrespective of their lack of knowledge of the military environment. The training of such officers will have to be systematically done under the supervision of the responsible medical officer of the command, who, doubtless, will almost always be a trained man. Such training must be carefully supervised, as there is always a tendency to subordinate it to existing duties. Both must receive a due measure of attention.

The following is an approximately accurate outline of what will be done in the training camps.

The course is intended to give the student officers a general idea of the basic duties of a medical officer and prepare them for service with troops in the field. Training will be intensive and pushed as rapidly as possible. It will be borne in mind that the services of thousands of instructed medical officers must be available at an early date.

The training to be given is intended to prepare these officers to conduct the service of the medical department without either the supervision of experienced medical officers or the aid of well-qualified noncommissioned officers. The limited number of these two classes in the medical department, and the necessity of assigning many of them to important administrative duties, renders it probable that few will be available for regimental duty, and only a small number with ambulance companies and field hospitals.

For this reason, also, on the reserve and militia medical officers, graduated from these training camps, will fall the duty of themselves drilling and training the very many thousands of enlisted raw recruits which will be assigned to the medical department, and they must be put into a condition to carry out this most important work effectively.

It is expected that each camp shall have accommodations for 600 medical officers. They will be organized into companies, duly officered, commissioned and noncommissioned, to be selected from among the student officers and trained on a basis of medical cadets. It is desired to impress on these new officers, by actual experience, what will later be required by them of their subordinates.

The staff of the commandant, a medical officer, will be composed of an assistant commandant, an adjutant and a quartermaster, all of whom will be instructors in addition to their other duties. It is proposed, if possible, to assign additional instructors on the basis of one to each fifty student officers. Due to the shortage of regular officers, specially qualified militia medical officers may be assigned to such duty. Officers with regimental detachments, ambulance companies and field hospitals will, in addition to their duties as such, serve as instructors, due effort being made to assign to each subject, officers known to have given special attention thereto and to possess ability to impart information and student officers found specially qualified in any subject may be assigned as instructors and given special authority while so serving, irrespective of rank.

The assistance of the line officer instructors at line camps in teaching map reading, special lectures and the tactical part of medicomilitary problems and maneuvers may be requested.

Instruction by lectures, except in special subjects, will, as far as possible, give place to recitations. Lectures are not considered as effective as recitations in imparting detailed information, nor do they afford opportunity to test the capacity of and grade the student.

Lessons will, therefore, be assigned in the authorized textbooks, and quizzes held thereon, for the purpose of grounding students in theory and insuring that a competent knowledge of methods and principles has been acquired. But coincident with this theoretical instruction, the student officers should, as far as possible, be made to visualize the organizations, apparatus and methods concerned. In addition to study and lectures, it is most important that they should learn by seeing and doing. So far as possible, instruction will be made practical. To this end, for example, all sanitary appliances and methods likely to be of use in field work will be procured or constructed and continually kept in effective operation at the camp, and the officers will be shown their purpose and practical use. Bomb proofs for trench warfare will be thrown up, and gas chambers for practical trial of protection against poison gases will be constructed.

In connection with paper work, all papers required by the medical and other departments will be actually made out until familiarity therewith, and correctness of result, is secured.

Mess management, taught in theory, will be actually demonstrated in the organization kitchens. Applied camp sanitation will be taught by sanitary inspectors. Drill will be taught until every officer can effectively handle and instruct therein the units and detachments of the medical department.

The interior economy and administration of regimental detachments, ambulance companies and field hospitals will be taught not only by books but by assignment to such organizations and quartering and subsistence therewith, and by actually handling them in marches and comprehensive field problems. To permit of the latter it is expected that four ambulance companies, four field hospitals, and six regimental sanitary detachments, all complete and kept recruited up to war strength will be organized without delay. The regimental detachments will be organized as two provisional companies, to be split into their integral regimental parts for demonstration purposes.

Student officers will be assigned to duty with regimental detachments, ambulance companies and field hospitals as junior officers and supernumeraries, to familiarize them with these organizations, the handling of men, etc. Officers so assigned should be quartered and messed with these organizations, but will pursue the regular curriculum of training at the camp. Assignments should be made in rotation, and ordinarily for ten days with each organization.

The training course will be divided into three periods, of one month each. The first, while instructing the officer as such, is intended especially to familiarize him with the duties of his enlisted subordinates whom he must shortly train. The second takes up his training in his own special functions as an officer. The third carries on and completes the work of the second period.

New training classes should as far as possible be started at the conclusion of each month's training period. However, to meet immediate needs, officers needing training will be sent to camps at any time and will be organized at once into groups for instruction.

The following textbooks are authorized for the course: Army Regulations; Manual of the Medical Department; Field Service Regulations; Drill Regulations for Sanitary Troops; Manual of Courts Martial. Such other school textbooks as may be authorized will be announced later.

The instruction, except Saturday afternoon and Sunday, should approximate seven and a half hours. The following general scheme is suggested for the daily schedule for the first month:

6	A. M.	Reveille.
6.15- 6.30	A. M.	Setting up.
6.35- 7.25	A. M.	Breakfast. Police of quarters.
7.30- 8.25	A. M.	Drill (marching?).
8.30- 9.25	A. M.	Drill (special?).
9.30-10.25	A. M.	Quiz or lecture.
10.30-11.25	A. M.	Quiz or lecture.
11.30-12.55	P. M.	Dinner, rest, etc.
1.00- 1.55	P. M.	Quiz or lecture.
2.00- 2.55	P. M.	Quiz or lecture.
3.00- 4.25	P. M.	Equitation.
4.30- 5.55	P. M.	Care of animals, supper, rest, etc.
6	P. M.	Retreat.

On this general plan, 180 hours of formal instruction will be given monthly. No evening exercises are contemplated. Time will be needed for study. Saturday afternoon to be a rest period. Officers to be encouraged in equitation on Sunday, preferably in form of tactical ride. The schedule for the third month will vary materially from above, due to the practical field sanitary problems contemplated, and the fact that at least one full half day is ordinarily needed for each. This provides for a total course of 580 hours of instruction.

The following will indicate the proposed scope and distribution of training of medical officers during the first period of one month of thirty days:

	Hours
Setting up (15 minutes daily for 26 days)	6.5
Drills (marching, litter, ambulance, other means of transport)	52
Inspections	4
Equitation, bridling, saddling, care of animals, etc.	33
Tent pitching, shelter tent	2
Tent pitching, pyramidal tent	2
Personal equipment of the sanitary soldier	1
Field and surplus kits	1
Care and maintenance of soldier's equipment	2
First aid, using soldier's equipment only	2
Examination of recruits, with papers and finger prints	8
Nature and employment of regimental medical supplies	8
Customs of the service	2
Duties of the soldier	4
Regulation of Medical Department to rest of Army	1
General Organization of Medical Department for war	4
Army Regulations	12
General organization of military forces	2
Manual for the Medical Department	12
Military hygiene and sanitation	6
Field Service Regulations	6
Paper work, relating to the Medical Department	4
Map reading, use of compass, orientation, etc.	6
	180

The following scheme shows the scope and distribution of training of medical officers during the second period of one month of thirty days:

	Hours
Setting up (15 minutes daily for 26 days)	6.5
Drills, marching	26
Inspections	4
Equitation and care of animals	33
Tent pitching, hospital tentage	4
Elementary road sketching	4
The regimental detachment; its use and internal administration	8
The ambulance company; its equipment, use and internal administration	8
The field hospital; its equipment, use and internal administration	8
The tactical use of infantry (lecture by line officer)	1
The tactical use of cavalry (lecture by line officer)	1
The tactical use of field artillery (lecture by line officer)	1
The use of the Engineer and Signal Corps (lecture by line officer)	1
The service and mechanism of supply in the field (lecture by Quartermaster)	1
Paper work, relating to the Medical Department	12
Paper work relating to the Quartermaster's Department	4
Paper work, relating to the Ordnance Department	2
The Medical Department in campaign	8
The principles of sanitary tactics	8
Map problems	4
War games	8
Military hygiene and sanitation	12
Army Regulations	6
Manual for the Medical Department	6
Lectures on special subjects	6
Total	180

The following scheme shows the scope and distribution of training of medical officers during the third period of one month of thirty days:

	Hours
Setting up (15 minutes daily for 26 days)	6.5
Drills (service as drill master in drills of diverse nature)	26
Inspections	4
Equitation	15
Handling of rations and mess management	2
Manual for Court Martial and military law	8
The Articles of War	1
The Geneva and Hague Conventions	1
The rules of land warfare	1
Military surgery	8
Poison gases, protection against, symptoms and treatment (demonstrations)	1
Liquid fire, shell shock	1
War psychoses and neuroses	2
Malingering	1
Trench warfare; "trench foot"	1
Demonstration of trench system, including bomb proofs, dug-outs, entanglements, abattis, etc.	1
Cantonment hospitals, organization and management of	2
The sanitary service, line of communications	1
Hospital ships, ships for patients, hospital trains, trains for patients	2
Base hospitals, their organization and management	1
General hospitals, their organization and management	1
Contagious disease hospitals, casual camps, convalescent camps, camps for prisoners of war	1
Organization, functions and limitations of the American Red Cross	1
The civil sanitary function of the Army Medical Department in occupied territory	1
War games	2
Tactical rides	6
Sanitary inspections, practical demonstration of methods of	4
Practical march and bivouac (2 days)	15
Practical field maneuvers, including brigade and divisional problems with two night problems, and utilizing regimental detachments, ambulance companies, field hospitals, stations for slightly wounded, etc., in coordination. Problems will include the attack, retreat, planned defense and reencounter with all arms	60
Lectures on special subjects	4
Total	180

To stimulate student officers to their best work a certain number of places in the grade of captain and major, Medical Department Officers Reserve Corps, will be left unfilled. Appointment will be made to these vacancies from among the student medical officers, who, on vote of the staff of instructors, are recommended by the commandant as possessing such exceptional knowledge, aptitude and efficiency as would qualify them for such increased rank.

To this end there will be established and maintained a grading system of marking, by which relative efficiency will be recorded.

Also medical officers satisfying the age and other requirements and after passing such examination as the surgeon general may require, may, subject to the vote of the staff of instructors, and approval of the commandant, be commissioned at once as first lieutenants in the medical corps of the army. If any reserve officer is found unfit for the service by reason of physical, mental, moral or temperamental reasons, he will, on vote of the staff of instructors, be recommended for separation from the service.

Age Limit for Medical Officers Training Camps

Three weeks ago we concluded an editorial comment with the statement, "The men assigned to these camps for training will probably be the younger men—those under 45." This has called forth a number of letters from men over 45, who evidently feel that they have been placed in the discard and will not have an opportunity to do active service. While the statement was correct, viz., that men over 45 are not ordered to the training camps, at the same time a request from commissioned medical reserve officers who are over this age and who are in good physical condition will be given consideration. Hence we would suggest that those officers who desire to obtain the training given in the camps of instruction for medical officers apply to the surgeon-general's office for such assignment. In doing this it would be well to state the age, date of physical examination and of commission, and rank.

Status of Physicians in the Draft

To the Editor:—Kindly advise as to status of medical men below 31, conscripted under the selective draft law. Will their rank be equivalent to that of a member of the Army Medical Corps, Reserve Medical Corps, or non-commissioned officer?

L. GREENBERG, M.D., Brooklyn, N. Y.

ANSWER.—The above letter is one of many that have been received covering the same question. The regulations for the draft and the exemptions have not yet been announced. Undoubtedly, however, the qualifications of the medical man if conscripted will be recognized in any assignment he may be given.

Staple Supplies for War Conditions

In addition to the list of staple surgical supplies announced last week, several other catalogues are in preparation as follows: 1. Medicine, Disinfectants, Anesthetics, Chemicals, etc.; 2. Hospital Equipment and Supplies; 3. Laboratory Apparatus; 4. Roentgen-Ray Apparatus; 5. Dental Instruments and Supplies. These catalogues will be distributed through the Council of National Defense and will be sent free on request to any physician. Address Dr. F. F. Simpson, Chief of the Medical Section, Council of National Defense, Washington, D. C.

Physicians Recommended for Commission in Reserve Corps

During the week ending June 9, 1917, twelve majors, fifty captains and 441 lieutenants were recommended to the adjutant-general of the army for commission in the Medical Reserve Corps of the Army.

Red Cross Commission to France

The Red Cross Commission to France which has gone abroad "for the period of the war" to study the needs and conditions of noncombatant populations in some of the European countries and to prepare the way for American troops, is headed by Major Greyson M. P. Murphy who has been given the military title and who goes with plenary powers. Major Murphy, who will be known as commissioner for Europe, is vice president of the Guarantee Trust Company, New York, and a graduate of West Point. There are eight deputy commissioners, including James M. Perkins, vice president of the National City Bank, New York; William Endicott of the firm of Kidder, Peabody and Company, New York; Carey Taylor, lawyer, New York; George B. Ford, town planning expert, New York; Ernest McCullough, engineer, Boston; A. W. Copp; Ernest P. Bicknell, who has resigned as director-general of civil relief of the Red Cross, and Dr. Alexander Lambert, New York, who is the medical member of the commission. The commission is accompanied by six inspectors for service in Europe, three secretaries and a comptroller. The work of this commission will be to undertake matters of civil relief and to take charge of the human and sociologic aspects of the care of the wounded. Henry P. Davison, chairman of the new Red Cross War Council, has described this work as "the most stupendous and appealing call in the history of the world to aid suffering humanity." The work of the committee is to be so extensive that its passports read only "to the Allies of the United States and to neutral countries."

Reserve Officers Ordered to Active Duty

The following officers of the Medical Reserve Corps at the places mentioned:

To FORT OGLETHORPE, GEORGIA: Captains Harry F. Watt, Ocala, Fla.; James W. Squiers, Fort Wayne, Ind.; Clement A. Penrose, Edgar B. Friedenwald and Arthur M. Shipley, Baltimore, Md.; Robert M. Donald, Hattiesburg, Miss.; Everett A. Lockett, Winston Salem, N. C.; Brayton E. Failing, Atlantic Highlands, N. J.; David H. Crawford, Newark, N. J.; William J. Condon, New Brunswick, N. J.; Blase Cole, Newton, N. J.; Frank Hancock, Norfolk, Va. Lieutenants Frank G. Grace, Walter F. Scott, Birmingham, Ala.; John R. Armistead, Jackson, Ala.; J. Roscoe Elliott, Laurel, Del.; George J. Schirch, Washington, D. C.; James W. Davidson, Clearwater, Fla.; Roscoe C. Hubbard, Ellenton, Fla.; William G. M'Nay, Jacksonville, Fla.; Orison O. Feaster, Micanopy, Fla.; Frank P. Hixon, Joseph A. Mixon, Pensacola, Fla.; Robert F. Godard, Quincy, Fla.; John H. Swafford, Athens, Ga.; Evans B. Wood, Atlanta, Ga.; Carl A. L. Binger, George H. Dorsey, Joseph S. Lawrence, Oscar V. Linhardt, Walter B. Martin, William Neill and Edgar P. Sandrock, Baltimore, Md.; Joseph M. White, Barnesville, Md.; Maynard J. Simmons, Indian Head, Md.; David A. Haller, Boston, Mass.; Harvey T. Cuming, Gloster, Miss.; Leonard Hart, Meridian, Miss.; Philip E. Brundage, Grantwood, N. J.; Widmer E. Doremus, Arlington, N. J.; William T. Elmore, Belleville; N. J.; Daniel L. Golann and Frank N. Mandeville, Newark, N. J.; Edward Guyon, Atlantic City, N. J.; William A. Newbold, Belmar, N. J.; Morris L. Potts, Trenton, N. J.; John F. Reeves, Elmer, N. J.; Frederic H. Thorne, Greystone Park, N. J.; George W. Vannatta, Orange, N. J.; Eric A. Abernathy and Louis H. Webb, Chapel Hill, N. C.; J. Rush Shull, Cliffside, N. C.; William J. Chewning, The Plains, Va.; Gerald A. Ezekiel, Richmond, Va.

To ROCKEFELLER INSTITUTE, NEW YORK, for special course, Majors John W. Hanner, San Francisco, Cal.; and William H. Moncrief, Tacoma Park, Md.

To FORT SNELLING, Lieut. Henry Power, Rochester, Minn.

To WASHINGTON, to Army Medical School for instruction, Captains Daniel W. M'Millan, Pensacola, Fla.; and Lester B. Rogers, New York City; Lieutenants Augustus C. Gray, Washington, D. C.; Gustave R. Gerson, New Orleans, La.; William H. Jenkins and William H. Toulson, Baltimore, Md.; John S. Abbott, St. Paul, Minn.; Roy L. Scott, Sayre, Pa. With American Red Cross, Major Alexander Lambert, New York City.

To ALLENTOWN, PA., and report to Major Elbert E. Persons, with U. S. Ambulance Corps now being organized, Lieut. Richard Slee, Swiftwater, Pa.

To PHILADELPHIA, to examine applicants for appointment in the O. R. C., Major Elijah H. Siter, Philadelphia; from Fort Thomas and report to Major Elbert E. Persons, Lieut. Rufus A. Van Voast, Cincinnati, O.

To LETTERMAN GENERAL HOSPITAL, SAN FRANCISCO, Supt. Emil O. Jellinek, San Francisco.

To ITHACA, N. Y., to examine applicants for aviation section, Lieut. Samuel A. Munford, Ithaca.

To DENVER, COLORADO, to examine recruits for base hospital No. 29, Capt. Cuthbert Powell, Denver.

To GOVERNOR'S ISLAND, for duty in transport service: Lieutenants Wesley M. Thomas, Chicago, Ill.; Leon E. Lesser and Moses Sandler, Brooklyn, N. Y.; John E. Conboy and Edwin W. Goodman, New York City; John J. Flynn, Yonker, N. Y.; Frederick A. Lobb, Hawley, Pa.; Harry T. Stockton, Marcus Hook, Pa.; Ralph S. Bromer, Harold S. Broomall, John B. Carson and Francis V. Gowen, Philadelphia, Pa.; James L. Hamner, Ammon, Va.; Beverly F. Eckles, Richmond, Va.

To FORT D. A. RUSSELL, Capt. Robert L. Tebbitt, Los Angeles, Cal.

To FORT MACKENZIE, Lieut. Thomas V. Moore, Washington, D. C.

To KEMMERER, WYO., Lieut. Hugh M. Ware, Butte, Mont.

To ST. LOUIS, MO., Lieut. Theodore P. Brookes, St. Louis.

To FORT BENJAMIN HARRISON, IND., for a course of instruction in the medical officers' training camp: Majors William L. Cousins, Atlanta, Ga.; Harold D. Cochrane, Albany, N. Y.; Fred H. Albee, Colonia, N. Y.; Richard Derby, Henry H. M. Lyle, Henry S. Satterlee and John Warren, New York City; Melvin M. Franklin and William Gillespie, Philadelphia, Pa. Captains John S. Dye, Waterbury, Conn.; John A. Martin, Indianapolis, Ind.; Sidney M. Bunker, Charles B. Hollings and William J. Mixter, Boston, Mass.; Charles Whelan, Hingham, Mass.; William Mitchell, Marion, Mass.; Frank W. George, Worcester, Mass.; Hugh McD. Beebe, Ann Arbor, Mich.; Ernest N. Dolman, Clark D. Brooks, Theodore A. McGraw, Jr., Frederick H. Newberry, William J. Stapleton, Jr., and Frank Luggs, Detroit, Mich.; Alex. J. MacKenzie, Port Huron, Mich.; Rollin C. Winslow, Sault Ste. Marie, Mich.; Amos G. Straw, Manchester, N. H.; Lester W. Lord, West Assipee, N. H.; Edgar A. Vander Veer and Howard L. Van Winkle, Albany, N. Y.; George P. Coopernail, Bedford, N. Y.; Thurston H. Dexter, Brooklyn, N. Y.; Ward J. MacNeal, Forest Hills, N. Y.; George Baehr, Edwin Beer, Wyndham B. Blanton, Archibald H. Busby, Herbert L. Cellar, Sidney Cohn, Robert T. Frank, John C. A. Gerster, Leopold Jaches, Samuel J. Kopetzky, Junius H. McHenry, Leo. B. Meyer, Bernard S. Oppenheimer, Marshall C. Pease, Jr., and Richard Weil, New York City; Max A. Almy and George H. Gage, Rochester, N. Y.; Harlow G. Farmer, Watertown, N. Y.; Robert Conrad, Blanchester, O.; David Marine, Cleveland, O.; John R. McDowell, Columbus, O.; Arthur Smith, Elyria, O.; Sidney M. McCurdy, Youngstown, O.; James P. Austin, Philadelphia; Ward Brinton, Philadelphia; Walter S. Cornell, George C. Kieffer, and Chas. M. Montgomery, Philadelphia; Frederic Proescher, Pittsburgh, Pa. Lieutenants Mathew H. Griswold, Kensington, Conn.; Charles A. Barron, Ga.; William P. Nicolson, Atlanta, Ga.; James A. Lindsay, Cairo, Ga.; Homer E. Line, William S. Ehrich, Evansville, Ind.; Edward J. Du Bois, Paul B. Coble and Frederick C. Warfel, Indianapolis; E. Adrian Fauve, Ft. Wayne, Ind.; Ephraim B. Chenoweth, Nineveh, Ind.; Clayton C. Campbell, Walton, Ind.; Robert L. Hoffman, Wichita, Kan.; Enoch Bush, Winchester, Ky.; Raymond Van Ness Bliss, Blue Hill, Me.; Charles E. Cook, Jr., South Berwick, Me.; Edson S. Cummings, Lewistown, Me.; Edgar T. Flint, Foxcroft, Me.; James F. Bowen, Amherst, Mass.; William R. Ohler, John A. Reese, James C. Janney, and George Leland, Jr., Boston, Mass.; Louis E. Mannix, Chicopee Falls, Mass.; Charles H. Watt, Fall River, Mass.; Howard A. Lampher, Chester, Mass.; John M. Maloney, Richard A. Rochford, Parker M. Cort, and William A. R. Chapin, Springfield, Mass.; Artemas W. Chase, Adrian, Mich.; Roland W. Kraft, Ann Arbor, Mich.; Elijah Van Camp, Athens, Mich.; Bernard J. Beuker, Atwood, Mich.; DeWitt C. Adams, Highland Park, Mich.; Roscoe G. Leland, Kalamazoo, Mich.; Harold E. Clark, Detroit, Mich.; Charles V. Crane, Sioux City, Mich.; Samuel Miller, Manchester, N. H.; Ernest L. Huse, Meriden, N. H.; Jasper W. Coghlan, Newark, N. J.; Frederick C. Smith, Fort Stanton, N. M.; Frank S. Child, Port Jefferson, N. Y.; Herbert C. Chase, Leon E. Deyoe, Allison H. Dugdale, Alfred Braun, George K. Rhodes, Abraham Zingher, Charles H. S. Selinger, Clarence P. Thomas, James W. Worcester, Bernard H. Eliasberg, Gilbert S. Osincup, William D. Anderson, Samuel H. Geist, Richmond R. Holt, Richard Bolling, and James M. Kent, New York City; Francis T. Duffy, Troy, N. Y.; Harmon H. Ashley, Machias, N. Y.; Albert Bowen, Rochester, N. Y.; John P. McQuillin, Stanley W. Pallister, Brooklyn, N. Y.; Joseph E. Rapuzzi, Staten Island, N. Y.; Ira A. Rowlson, Plattsburg, N. Y.; George S. Silliman, Westbury, N. Y.; William E. Youland and Otto R. Eichel, Albany, N. Y.; Melville D. Ailes, Warren, O.; Victor Biddle, Charles W. Mason, Steubenville, O.; Herbert A. Brown, Cincinnati, O.; Theodore Burstein, Cleveland, O.; Nathan W. Meyer, and Albin M. Painter, Youngstown, O.; Ralph T. Shipley, Carrolton, O.; Anton B. Spurney, Cleveland, O.; William T. Feuker, State Soldiers Home, O.; George A. Ferguson, Toronto, O.; Carl F. Hartmann, Wauseon, O.; Albert W. Cole, Robert T. Devereux, Thomas M. Armstrong, John A. Bertolet, Baldwin H. E. W. Lucke, William J. Lynch, Edward W. McCloskey, John E. Medley, Thomas G. Miller, Charles A. O'Reilly, Frank McC. Ramsey, William C. Ryan, Phillip A. Sheaff, Cheney M. Stimson, William D. Stroud, Isaac S. Tassman, Harry B. Wilmer, Karl D. Winter, Jay D. Zulick, John D. Elliott, Edgar W. Fought, Daniel M. Hoyt, Henry E. Keely, Frank C. Knowles, Jackson S. Laurence, William W. Lerman, Wilfred B. Fetterman, and Samuel Leopold, Philadelphia, Pa.; George W. H. Conrad, Johnstown, Pa.; Charles C. Crouse, Derry, Pa.; Richard H. Eanes, Widen, Pa.; James H. Austin, Ardmore, Pa.; Ralph E. Buckley, Hazleton, Pa.; Stoddard S. Burg, Northumberland, Pa.; Benjamin J. Longwell, Seminole, Pa.; George W. Miller, Norristown, Pa.; Henry Pleasants, Jr., West Chester, Pa.; Maurice S. Redmond, Austin C. Frank, Samuel Hamilton, Jr., Elmer C. Jackson, Carey J. Vaus, and Daniel F. Jackson, Pittsburgh, Pa.; Simon W. Reichard, Wilkes-Barre, Pa.; George H. Robinson, Uniontown, Pa.; Grover C. Schwartz, Perkasie, Pa.; Edward J. Gordon, Wyncote, Pa.; Ralph L. Hill, Woodville, Pa.; Robert C. Johnston, Springdale, Pa.; Harold De Wolf, Bristol, R. I.; Fred S. Wright, Brownsville, Tex.; William C. Moser, Morgantown,

W. Va.; Maurice C. James, Hinton, W. Va.; Esley T. Lake, Nuss, W. Va.; John S. Sharp, Salt Lake City, Utah; Benjamin L. Petry.

To ALLENTOWN, PA., report to Major Elbert E. Persons; Lieutenants Charles K. Berle, Louisville, Ky.; Samuel M. Browne, Orangeburg, S. C.; Rossner E. Graham, New Orleans; Thomas D. Hurley, New Orleans; Alexander E. Listoe, Washington; David E. Smith, St. Louis; Max R. Stockton, Philadelphia; George S. Woodward, Philadelphia.

To FORT RILEY, KANSAS: Majors George G. Davis and Ralph W. Webster, Chicago. Captains Basil C. H. Harvey, Homer K. Nicoll, Jesse E. Royer, Warren P. Sights, and Walter F. Von Zelinski, Chicago; Ellis K. Kerr, Oak Park, Ill.; John C. Staley, St. Paul; Francis St. C. Reilly, Inverness, Mont.; Harry Greenberg, Milwaukee. Lieutenants Frederick J. Smith, San Diego, Calif.; Caro W. Lippman, William A. Sampson, and Harold W. Wright, San Francisco; Herbert R. Stolz, Stanford University, Calif.; Ray H. Davies, Lee C. Gatewood, David H. Keller, Lawrence H. Rohlfer, and Andrew J. Lyons, Chicago; Royal Tharp, East St. Louis, Ill.; Gilbert J. Thomas, Minneapolis; Frank P. Kimball Frisch, Prairie, Minn.; Philip E. Stangl, St. Cloud, Minn.; Spies V. Wilking, Butte, Mont.; William J. Lewis, New York; Arthur T. Blachly, Portland, Ore.; Frank Van Doren, Seaside, Ore.; Harry T. D'Arc, Mt. Vernon, Wash.; Fred J. Whittaker, Republic, Wash.; Edmund H. Smith, Seattle; Frederick G. Sprowl and Herbert E. Wheeler, Spokane, Wash.; William T. Clark, Ft. Atkinson, Wis.; Earl L. Parmenter, Mondovi, Wis.; Clarence A. Richards, Rhinelander, Wis.; Albert M. Farrell, Two Rivers, Wis.

To PLATTSBURG BARRACKS, N. Y., Lieut. Charles W. Woodall, Schenectady, N. Y., report for duty to commanding officer of that post.

To FORT ETHAN ALLEN, VT., Lieut. John C. Murphy, Hinesburg, Vt., to report for duty to commanding officer of that post.

To FORT STEVENS, ORE., Capt. Arthur A. Finch, Astoria, Ore., to report for duty to commanding officer of that post.

To CINCINNATI, OHIO, Lieut. William J. Topmoeller, Cincinnati, Ohio, to report to Col. Lansing H. Beach, Corps of Engineers, Customhouse, for duty pertaining to the examination of reserve corps recruits.

To SAN FRANCISCO, CALIF., Lieut. Pierre N. Charbonnet, Ft. McDowell, Calif., is relieved from duty at Fort McDowell, Calif., and will report to commanding officer, Eighth Reserve Engineers Regiment, San Francisco, for duty.

Lieut. John C. Graham, Brooklyn, N. Y., is relieved from duty at Fort Hamilton, N. Y., and will proceed to his home, reporting on arrival to the Adjutant General of the Army by telegraph. Lieut. John C. Graham, is honorably discharged from the service of the United States, to take effect upon the expiration of the leave of absence granted him, his services being no longer required.

Charges Against the Naval Hospital Ship Solace Unfounded

"In our judgment, Surgeon-General Braisted of the Navy, Dr. Blackwood, medical inspector in command of the *Solace*, and his staff, as well as Dr. Pickerel, medical inspector in charge of the Naval Hospital, and his assistants, are all entitled to the highest praise for their devoted and untiring efforts and for the success which they achieved under extremely difficult conditions." Thus Dr. W. H. Welch, Dr. Abram Flexner, and Mr. Nathan Straus, the special committee appointed by Secretary of the Navy Daniels to investigate charges of conditions and management aboard the hospital ship *Solace*, are reported in THE JOURNAL, June 9, page 1706, sum up the results of their inquiry. Not only does the committee exonerate from all blame the officers and men named above, but it goes further and says that some of the charges were in fact untrue and others grossly exaggerated; that while the ship was overcrowded at the time the charges were made, yet there was no lack of care or medical attendance; that the patients suffering from different infectious diseases were carefully segregated; that the regulations in regard to sanitation were observed; and that the entire ship, including blankets, dishes, etc., was sterilized after every trip to the hospital.

The charges that led to the appointment of the committee were embodied in a "round robin," signed by 30 enlisted men in the navy, and were first brought to the attention of the public by Senator Calder, who presented them to the United States Senate in open session. The committee charged with the investigation of the matter visited the fleet, a large naval hospital, a naval training station, and a navy yard, where every facility for investigation was placed at their command. An entire day was spent on the *Solace*, and members of the staff and patients were questioned. In all more than 100 patients were interviewed, who were aboard the *Solace* when the "round robin" was drafted, or had been there either shortly before or shortly after that time, such interviews taking place in the absence of officers and attendants and under assurances from the committee that names of the patients interviewed would not be used.

Discussing conditions aboard the *Solace*, the committee calls attention to the fact that this is the only hospital ship in the navy. It has a normal capacity of 228 beds. Thirty of these, on the upper deck, arranged in three separate wards which have no direct communication with one another—one having eight beds, another having ten, and the third having twelve—are set apart for patients suffering from communicable diseases. Each ward has a lavatory, with a basin and running water. Two have separate compartments for washing dishes and other vessels. The third, the measles ward, has no such compartment, and dishes used in it are washed in large pans outside. All three wards are well ventilated, and serve their purposes excellently under normal conditions. The main hospital accommodations of the *Solace*—the medical and surgical wards, and the operating rooms—are on the deck below, and are reported by the committee as being models of their kind.

The staff consists of a medical inspector, who is in command; an executive surgeon; an operating surgeon; an internist; a specialist in genito-urinary diseases; a specialist in diseases of the eye, ear, nose and throat; a laboratory chief; a dentist; a pharmacist and assistants; and naval hospital apprentices, as they are officially designated, who are in effect male nurses specially trained for the naval service.

The accommodations of the *Solace*, however adequate for ordinary conditions, were, according to the report of the committee, clearly overtaxed as the result of the rapid assembling of naval recruits, following the official recognition of the existence of a state of war, but the committee recognizes the skill and intelligence of the naval officers on duty in utilizing to the very best advantage such resources as were at their command to meet the emergency. Recruits from all over the country rapidly poured into training camps, and from these camps they were sent to the fleet. Something of the magnitude of this assembling of recruits can be understood when it is realized that at Norfolk sometimes 700 and more arrived in a day, and that the fleet population of 25,000 was speedily gathered there. The unusual prevalence throughout the country of measles, mumps, scarlet fever and cerebrospinal fever, and the rapid assembling of these recruits necessary in the early days of mobilization, inevitably lead to a considerable number of cases of the common infectious diseases.

"The war vessels," according to the report of the committee, "had at once to transfer their infectious cases to the *Solace*, which, equipped to handle comfortably 30 infectious cases, had to handle at times more than three times that number. The pressure was most severe between the 18th and 21st of May, the dates covered by the round robin. On May 18 there were seventy-two infectious cases on board. Eight more were added on the 19th, fourteen more on the 20th, and seven on the 21st—101 in all—over three times the normal capacity of the hospital ship. It was impossible for the *Solace* to avoid congestion by more frequently transferring patients to the Naval Hospital. In the first place, the Naval Hospital was itself overtaxed, and the bungalows and tents which now enable the hospital to accommodate a largely increased number of patients had not then been sufficiently provided. Again, on account of its operating facilities and its facilities for taking care of noncontagious medical patients, it was important that the *Solace* stay by the fleet, avoiding as long as possible the loss of time required for the trip to the hospital and back."

In order to meet the increased demands, the staff of the *Solace* was increased, tents were erected on deck, and cots and army stretchers were provided. Arrangements were made for an ambulance transport, to carry patients from the *Solace* to the Naval Hospital, and this was put into service a few days before the committee made its report. Strict precautions were taken at all times to prevent the spread of infections, with marked success, cross-infections being extremely rare, both on the *Solace* and in the Naval Hospital.

Discussing specific complaints, the committee reported that it was unable to find anyone except the author of the "round robin" who stated that patients were compelled to carry their own baggage; that the charge in reference to the scarcity and temperature of the drinking water was grossly exaggerated, and the implication of lack of care entirely undeserved; that the charge that "vessels were standing around with germs of scarlet fever and mumps" in the lavatory where the dishes used by men sick with measles were washed, was impossible and absolutely absurd; that the method adopted for feeding patients was the only one practicable and was entirely correct; that the committee was unable to find a single patient, except the author of the "round robin," who complained that he was unable to get enough food, and that even he, according to the statement of one of his neighbors, was fed regularly and abundantly; that while a few patients stated that on the night of their

arrival on the *Solace* litters and cots had given out, and they slept between blankets on the deck, yet under the circumstances no special harm could have resulted, and in the opinion of the committee the charge applied to so few persons as to be practically negligible; that the charge that blankets were passed indiscriminately among patients suffering from measles, mumps, and scarlet fever, without disinfection, was not supported by the facts of the case, including the extremely good records of the *Solace* and Naval Hospital with respect to cross-infections; and that the charge that sick men were unable to wash themselves at proper intervals was not supported by the testimony of the patients interviewed by the committee.

Protecting the Practice of the Absent Physician

The Ninth District (Kansas) Medical Society adopted resolutions to the effect that the men who remain at home shall attend to the business of physicians who are called to active duty with the army, and on the return of these physicians turn back the patients together with one third of the income received during the physicians' absence. They resolved, further, to discourage the attempt of any physician to locate permanently in a community temporarily vacated by the physician who has gone to the front.——The auxiliary council of the Allegheny County (Pa.) Medical Society has announced that physicians, members of the society, who enter military service will receive 35 per cent. of the income of their practice while they are absent.——At a meeting of the Kings County (N. Y.) Homeopathic Medical Society, in Brooklyn, resolutions were adopted that the society protect, by every possible measure, the private practice of medical men who enter military service.——At the May 28 meeting of the Medical Society of the County of New York, it was announced that a fund had been started by Dr. Edwin B. Cragin for the support and care of the wives and families of members of the society and other members of the profession of New York who may require financial aid as the result of the head of the family being called into the service of the country. Dr. Cragin started this subscription with $10,000. Dr. John F. Erdman gave $5,000 and Dr. Seth M. Milliken $1,000 to the fund. The president of the society announced the formation of a joint committee of the New York City Academy of Medicine and the society to administer the fund and receive contributions. The committee will be known as the Committee on the Amelioration of Hardships of the Families of Physicians Called into National Service. Dr. Walter B. James is chairman; Dr. Edward L. Hunt, secretary; Dr. J. Bentley Squier, Jr., treasurer of the committee.——The Audubon County (Iowa) Medical Society has adopted resolutions endorsing either the payment of $5 per month for each member of the society who is in the military service or the payment of one third of the fees collected for service to regular patients of the absent member while he is in the military service.——The executive committee of the faculty of the medical department of the University of Louisville has adopted resolutions that any members of the teaching forces who may join the medical service of the United States will be reemployed by the university at the end of hostilities.——The Indianapolis Medical Society has adopted resolutions recommending that one third of the fund collected for professional work by physicians in Marion County for services to the families of physicians in government service be turned over to the absent physicians on their return or be paid to their families.——The Madison County (Ind.) Medical Society has decided to take care of the practice of the four physicians of the county who are in the army medical service and return the practice to them when they leave the army.——Physicians of Douglas County, Wis., who enter military service will be given one third of the receipts from patients who ordinarily would have employed the absent physician. An agreement to this effect has been drawn up by the county medical society.

To Raise Field Hospitals and Ambulance Companies.—Major James F. Hall, M. C., U. S. Army, has selected the following physicians to enlist and presumably to command additional field hospitals and ambulance companies; assigned to field hospitals are: Drs. Charles R. Morgan, Boston; Major Bial F. Bradbury, Togus, Me.; Howard W. Beal, Worcester, Mass.; Otto G. Wiedman, Hartford, Conn.; Edmund Russell, Waterbury, Conn., and Harold G. Giddings, Boston; those assigned to ambulance companies are: Drs. Howard D. F. Lockwood, Meriden, Conn., and William E. Hamlin, Waltham, Mass.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST; SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ILLINOIS

The Alumni Elects Officers.—The Alumni Association of the Northwestern University Medical School held its annual meeting in Chicago, June 11, under the presidency of Dr. James H. Stowell, and elected the following officers: president, Dr. Carl E. Black, Jacksonville; vice president, Dr. Victor D. Lespinasse, Chicago; secretary, Dr. Leo G. Dwan, Chicago (reelected), and necrologist, Dr. Samuel C. Stanton, Chicago (reelected).

Chicago

Summer Session.—The second session of the Graduate Summer Quarter in the College of Medicine of the University of Illinois will open June 20, to be continued until September 12.

Senior Student Dies.—Michael Henry Flynn, a senior student in Rush Medical College and an intern in St. Joseph's Hospital, who fainted and fell fracturing his skull, while assisting in an operation at the hospital, May 24, died in the institution a week later.

Personal.—Dr. Luther H. Maloney, formerly of Savanna, has been appointed medical director of the Rockefeller Municipal Sanatorium.——Dr. Julius H. Hess, Chicago, has been appointed professor and head of the division of Diseases of Children in the University of Illinois College of Medicine, and chief of the department of Diseases of Children in Cook County Hospital. Associated with Dr. Hess is Dr. Jesse R. Gerstley.

MARYLAND

Personal.—Dr. Hugh Hampton Young, major in the Officers' Reserve Corps, who is head of the commission appointed officially to represent the medical service of the American army abroad, has arrived in London. With Dr. Young are Dr. Louis C. Lehr, Washington, D. C., and Dr. Howard L. Cecil, Baltimore.

Women Physicians Elect Officers.—At the annual meeting of the Women's Medical Society of Maryland, held in Baltimore, May 23, Dr. Caroline B. Towles was elected president; Dr. Anna D. S. Abercrombie, vice president; Dr. Flora Pollack, corresponding secretary; Dr. Mary C. Willis, recording secretary, and Dr. Mary P. Voeglein, treasurer, all of Baltimore.

St. Joseph's Hospital to Offer Unit.—Arrangements are under way at St. Joseph's Hospital, to form a well equipped hospital unit for active service in the field. As soon as the plan of organization is complete, the staff will volunteer as a whole for immediate service. Foremost in the plans of the organization are: Drs. William H. Yeager, chief resident physician; James A. O'Donnell, Frank Martin, Johnson and George W. Bishop.

Park Physicians Selected.—A corps of surgeons is to be selected by the park board for the treatment of employees injured in the service. The following were recommended by the district superintendents and are expected to be named by the board: Drs. Harry C. Algire, Charles S. Parker, William G. Coppage, Jacob Fisher and L. Ridgely Wilson. A surgeon is to be assigned to each of the five districts and paid only when called on to render professional service.

MINNESOTA

Southern Minnesota Physicians to Meet.—The midsummer meeting of the Southern Minnesota Medical Association will be held at Faribault, June 23 and 24. The preliminary program includes papers on unusual fractures and dislocations, the tuberculosis situation, and the diagnosis and treatment of epidemic cerebrospinal meningitis.

Personal.—Dr. George B. Weiser, New Ulm, has been appointed a member of the State Board of Medical Examiners.——Dr. Russell Noice, Minneapolis, has been appointed first lieutenant of the Medical Corp, and assigned to duty with the First Minnesota Infantry, succeeding Dr. Ralph J. Sewall, Crosby, resigned.——Dr. Edward A. Eberlin has been appointed local surgeon for the Minneapolis, St. Paul and Sault Ste. Marie Railway at Glenwood.

Hospital Notes.—The construction of the five proposed additional stories of the Minneapolis Hospital is approved by the ways and means committee of the city council. The total cost of the addition will be about $80,000.——The contract for the construction of the Sacred Heart Sisters' Home, East Grand Forks, has been awarded for $25,000.——The board of directors of the Bethseda Hospital Association, Crookston, has decided not to build the proposed addition to the institution at present, on account of the high cost of material.

NEW YORK

Police Ambulance for France.—The honor legion of police department have set aside $1,100 for the purchase of an ambulance and a movement has been started by civilian backers of the legion to send several ambulances which will be driven by New York policemen.——Eighty clubs and members of the Metropolitan Golf Association have contributed $85,000 in a Red Cross benefit tournament toward the purchase of fifty ambulances which they will maintain along the French frontier.

New York City

Association of Cardiac Clinics Meets.—The Association of Cardiac Clinics, organized at a meeting of workers of special cardiac clinics of New York, Feb. 14, 1917, held its second meeting on April 30. At this time a report was made on the districting of the city as an aid to the work of the clinics. Arrangements were made for sending patients to convalescent homes and a classification of patients with cardiac disease was outlined and accepted.

Personal.—A loving cup was presented to Dr. Thomas E. Satterthwaite at the annual banquet of the American Therapeutic Society, June 2. The inscription states that the cup is given as "a token of esteem, and in recognition of his faithful and valuable services to the society and to the medical profession." The presentation was made by Prof. Oliver T. Osborne of Yale University.——Dr. Anthony Bassler has been elected professor of gastro-enterology in the New York Policlinic School and Hospital.——It is reported that the condition of Dr. Hideyo Noguchi, who is seriously ill with typhoid fever in Mount Sinai Hospital, is improving.——Dr. Marcus B. Heyman, assistant superintendent of the Central Islip State Hospital since 1897, has been appointed medical inspector of the State Hospital Commission. Dr. Heyman's place has been filled by the appointment of Dr. Horatio G. Gibson, Jr.

OHIO

Personal.—At the meeting of the Alliance Medical Society, May 31, Drs. Homer G. Scranton and Benjamin C. Barnard, who have accepted commissions in the Medical Corps, U. S. Army, were presented with gold wrist watches at the meeting of the Alliance Physicians' Society.——Dr. Charles M. Mooney, Waverly, is reported to be seriously ill with septicemia in the Cincinnati General Hospital.——Dr. William W. Pennell, Mount Vernon, who has been seriously ill in a hospital in Cincinnati, is convalescing, and has gone to the home of his daughter in Washington Court House.

Survey of Hospitals and of Medical Licensure.—Governor Cox of Ohio has created a commission to make a survey of, and a subsequent report with recommendations regarding (*a*) the present system and laws relating to the incorporation, licensing, inspection, supervision and regulation of public and private hospitals, and (*b*) the present system and laws relating to medical licensure and medical education, and the education and licensure of those who treat the sick public by systems of healing other than medical. On this commission the governor appointed Mr. Howell Wright, secretary of the Cleveland Hospital Council, and Mr. George V. Sheridan, executive of the Ohio State Medical Association, Columbus.

Cleveland

"Fraudulent Proprietary Medicines.—The sale of Kilmer's 'Swamp Root,' 'Varlex' and 'Sargol' has been ordered discontinued in Cleveland since the inauguration of the City Bureau of Laboratories' Crusade against fraudulent proprietary medicines and other misbranded preparations. 'Swamp Root' is largely a dilute alcohol-water solution of sugars and absolutely injurious in the case of kidney disease, which it professes to cure, according to the bureau's analysis. 'Sargol' claimed to be a flesh builder. Letters notifying the company of the city's action were returned marked fraudulent' by the Postoffice Department. 'Varlex' was advertised as a cure for the tobacco, drug and liquor habit. The bureau is busily engaged in gathering data and an embargo will shortly be placed on a number of other products."

PENNSYLVANIA

Personal.—Dr. Robert C. King, Hellertown, suffered a fracture of the knee cap when he lost control of his automobile near Shimerville.——Dr. Daniel P. Gerberich, Lebanon, who has been seriously ill, is reported to be convalescent.——Dr. George B. Klump, Williamsport, has been appointed local surgeon for the Pennsylvania System to succeed Dr. Eugene B. Campbell, deceased.——Dr. Roderick E. Albright, Allentown, who was operated on for appendicitis, recently, is reported to be convalescent.

Antidope Bill Passes.—The antidope bill unanimously passed the house of representatives, June 7. This bill is designed to correct not only the social evils of Pennsylvania but to enforce the federal laws governing traffic in narcotic drugs. A fine feature of the bill is the one dealing with the treatment of the addicts by practicing physicians who must register the names of such patients with the board of health. Agents of the board, who cover every section of the state, must make their complaints to the different district attorneys.

Committee for Recruiting Reserve Officers.—Physicians of Pennsylvania who have not already responded to the call for war duty by enlisting in the Medical Reserve Corps are being urged to rally in the cause. A committee has been formed within a few days and will conduct a campaign for the purpose of arousing patriotism. The committee who will urge the enrolment of more than 13,000 physicians within the commonwealth was designated today by Dr. Edward Martin, professor of surgery in University of Pennsylvania. He is chairman of the state committee of the Council of National Defense.

National Guard Changes.—The following commissions to medical officers have been issued: majors: Norman D. Smith, Rutledge; Leonard D. Frescoln, Philadelphia; Charles P. Brady, Philadelphia, and Scott M. Huff, Center County; lieutenants: Royal H. McCutcheon, Bradford Massey, Charles S. McGivern, James R. Martin, Washington Merscher, Philadelphia; Vite E. Van Kirk, Jr., Pittsburgh.——Lieut. Frank B. Baird, M. C., has resigned.——Capt. Eugene Swayne, Philadelphia, has been relieved of duty with Field Hospital No. 2, and Lieut. Charles S. Pancoast from Ambulance Company No. 1, and both have been assigned to Field Hospital No. 3.——Lieut. D. E. Sable has been released from duty with Ambulance Company No. 1, and assigned to the First Field Hospital.——Major Gregg A. Dillinger, M. C., has been relieved of assignments with the First Field Artillery, and directed to await further orders.

Philadelphia

Charitable Bequest.—The will of the late Dr. Louis P. Posey bequeaths his medical library to the Hahnemann Medical College and Hospital of which he was manager.

Medical Club Reception.—The Medical Club of Philadelphia gave a reception in honor of Col. John Gribbel, president of the Union League Club, and the Hon. George B. Orlady, M.D., LL.D., presiding judge of the superior court, on June 8, at the Bellevue-Stratford Hotel.

Jefferson Commencement.—The ninety-second annual commencement of the Jefferson Medical College was held in the Academy of Music on June 2. Edwin Erle Sparks, Ph.D., LL.D., president of the Pennsylvania State College, delivered the valedictory address and 140 men were graduated.

Ambulance for Hospital Unit.—Base Hospital No. 34, being organized by the physicians of the Episcopal Hospital, has been presented with a motor ambulance by the parishioners of St. Stephen's Church. The car will hold four patients, as well as driver and attendant. This unit consists of twenty-five surgeons, sixty-five nurses and 125 orderlies and attendants.

Personal.—Dr. Francis E. Stewart, professor of clinical surgery, Jefferson Medical College, delivered the annual address to the graduating class of the Jefferson Hospital Training School for Nurses, on May 24, in the hospital amphitheater.——Dr. Luther C. Peter has been appointed professor of ophthalmology in Temple University.——Dr. William T. Ellis, Swarthmore, and Charles Beury, Tioga, sailed from Vancouver, June 7, on the *Empress of India* for Russia and the Caucasus, to make a study of the refugees and of the

relief work that is being done in that portion of Asia.——The Medical Club of Philadelphia gave a reception, June 8, at the Bellevue-Stratford Hotel in honor of Col. John Gribbel, president of the Union League, and Hon. George B. Orlady, M.D., presiding judge of the superior court.——The resignation of Dr. Clara Marshall, dean of the Women's Medical College of Pennsylvania, was announced, June 6, and Dr. Martha Tracy, professor of chemistry at the college, has been appointed acting dean.——Dr. John B. Deaver was elected vice president, and Dr. John H. Gibbon, secretary, of the American Surgical Society at its closing session in Boston, June 2.

VIRGINIA

Senior Student Dies.—Lewis Banks Payne, son of Dr. Robert L. Payne, Norfolk, a senior student in Jefferson Medical College, Philadelphia, died in that city, May 7, from pneumonia.

New Society Organized.—The Albemarle Medical Society was recently reorganized at Charlottesville with the following officers: president, Dr. Edward M. Magruder; vice president, Dr. William D. Macon, and secretary-treasurer, Dr. Frank C. McCue.

Faculty Named for Social Economy School.—The following physicians are announced as members of the faculty of the Richmond School of Social Economy: Drs. Ennion G. Williams, Roy K. Flannagan, James H. Smith, William H. Higgins, McGuire Newton and Aubrey Straus.

New Officers for Health Association.—At the annual meeting of the Virginia Public Health Association, held in Lynchburg, Dr. W. Brownley Foster, Roanoke, was elected president; Dr. Claude B. Bowyer, Stonega, vice president; Dr. Roy K. Flannagan, Richmond, secretary-treasurer.

Medical School Changes.—At the meeting of the board of officers of the University of Virginia at Charlottesville, Dr. Theodore Hough, acting dean, was made dean of the medical school; Dr. James A. Wardell, associate professor, was made professor of pharmacology and materia medica, and Dr. John H. Neff, instructor, was made adjunct professor of genito-urinary surgery.

Personal.—Dr. John H. Ayers, Accomac, has been appointed a member of the State Board of Medical Examiners, succeeding Dr. Joseph N. Barney, Jr., Fredericksburg, who resigned, to accept military service.——Drs. William F. Parker and James P. Roy have been reelected grand medical examiners of the Order of Heralds of Liberty.——Dr. William A. Brumfield, Lynchburg, has been confirmed as assistant state health commissioner, succeeding Dr. Roy K. Flannagan, resigned, to become chief health officer of Richmond, in place of Dr. Ernest C. Levy.——Dr. James M. Whitfield, city chemist of Richmond, has resigned, to become coroner of Henrico County to serve out the term of the late Dr. William H. Taylor.

WISCONSIN

District Society Meeting.—At the annual meeting of the Ninth District Medical Society, held in Stevens Point, May 30, Dr. Ellietson H. Rogers, Stevens Point, was elected president, and Dr. Joseph F. Smith, Wausau, was elected secretary.

Field Hospital and Ambulance Companies.—The War Department has ordered Wisconsin to furnish two field hospitals and two ambulances companies. One field hospital is already organized in Milwaukee and one ambulance company in Racine. A second field hospital is to be organized in Madison, and will be in charge of Lieut. W. F. Lorenz.

Personal.—Dr. Joseph B. Noble, Waukesha, who has been seriously ill with septicemia as the result of a glass wound of the finger, is reported to be convalescent.——Dr. Oscar Lotz, Milwaukee, has been appointed a member of the Wisconsin State Board of Medical Examiners.——Dr. Charles M. Gould, for six years health commissioner of Superior, has resigned on account of ill health.

Compensation for Typhoid.—The State Industrial Commission has announced awards in the seven Eau Claire typhoid fever cases, totaling $5,356.83. These cases go back to 1914, when thirteen workmen employed by the New Dells Lumber Company and two men employed by the Pioneer Furniture Company contracted typhoid fever, two dying. In accordance with the decision of the supreme court, the industrial commission in these cases holds that typhoid fever contracted by an employee as the result of drinking polluted water furnished by an employer is a personal injury accidentally sustained.

WYOMING

New County Society.—Physicians of Albany County met at the Invinson Memorial Hospital, Laramie, May 30, and organized the Albany County Medical Society, electing Dr. Herman E. McCollum, president; Dr. J. W. Price, vice president; Dr. Josiah P. Markley, secretary, and Dr. Henry L. Stevens, treasurer.

CANADA

Health Certificates Before Marriage.—The National Council of Women, meeting at Winnipeg, Man., has passed a resolution calling on all provincial governments in Canada to make it a law that health certificates must be produced before a marriage license is granted in Canada, the idea being to protect the race from contamination with venereal disease.

Health Officers' Election.—The Ontario Health Officers' Association held its sixth annual meeting in Toronto, May 19 and 20, under the presidency of Dr. Alexander J. Macaulay, M. O. H., Brockville. The principal address was that of Dr. C. E. A. Winslow, professor of public health in Yale University on "Safeguarding the Health of Young Children." The following officers were elected: president, Hibbert W. Hill, M. O. H., London; vice presidents, Georgia S. Cruickshank, M. O. H., Windsor; E. A. Wincon, M. O. H., Kingston, and secretary, Dr. John W. S. McCullough, Toronto.

Personal.—Major Thomas D. Archibald, Toronto, who was overseas for a year or more, and who some weeks ago returned to Toronto, has been appointed officer commanding at the Whitby Hospital for returned wounded soldiers.——Lieut. Clifford K. Langford, M.D., Saskatoon, Sask., has been appointed to the standing medical board in that district——Drs. R. J. Roche and Cameron T. Coulter, Gull Lake, Sask., have been appointed officers on the district medical mobilization board.——Dr. Theodore G. H. Drake, Toronto, after spending a year with the Royal Army Medical Corp in France, has returned to Canada, and has located at Carson, Sask.——Capt. C. Gordon Gunn, M.D., Edmonton, Alta., has been recommended for distinction on account of conspicuous bravery.——Lieut.-Col. William B. Hendry, Toronto, in command of the University of Toronto Base Hospital at Saloniki, was the recipient of D.S.O. in His Majesty's birthday honors.——Dr. David S. Johnstone, Regina, Sask., who recently went overseas as radiographer to the C. A. M. C., is connected with Saskatoon Field Hospital No. 8.——Lieut.-Col. Cameron A. A. Warren, second in command, Toronto Military District, has resigned and has been appointed to the New York office of the British office for recruiting of British subjects.——Capt. E. Ward Wright, Toronto, who has been in command of the Soldiers' Convalescent Home, Whitby, Ont., has resigned, and has accepted an appointment in the office of the British ministry in New York.

GENERAL

Association Purchases Liberty Bonds.—The Board of Trustees of the American Medical Association, at its meeting in New York last week, voted to invest the sum of $20,000 in Liberty Loan Bonds.

Dr. Seale Harris Ill.—Dr. Seale Harris, editor of the *Southern Medical Journal*, developed an acute attack of appendicitis while attending the New York Session of the Association. He was operated on at the Roosevelt Hospital and is reported to be making an uneventful recovery.

Association of American Teachers of the Diseases of Children.—This organization held its eleventh annual meeting at the Plaza Hotel, New York, June 4, 1917, under the presidency of Dr. Laurence R. DeBuys, New Orleans. The officers elected for the ensuing year are: president, Dr. John Lovett Morse, Boston; senator at large, Dr. Harry M. McClanahan, Omaha; secretary, Dr. Edgar P. Copeland, Washington, D. C., and treasurer, Dr. Harry Lowenburg, Philadelphia.

Laryngological Society Elects.—At the closing session of the American Laryngological, Rhinological and Otological Society, the following officers were elected: president, Dr. George L. Richards, Fall River, Mass.; vice presidents, Drs. D. Crosby Greene, Jr., Boston; Daniel W. Layman, Indianapolis; Frank R. Spencer, Boulder, Colo.; secretary, Dr. William H. Haskin, New York; treasurer, Dr. Ewing W. Day, Pittsburgh; council, Drs. S. McCuen Smith, Philadelphia; Robert Levy, Denver; D. J. Gibbs Wishart, Toronto; Edward B. Dench, New York; Thomas H. Halsted, Syracuse; Walter A. Wells, Washington, D. C.; Thomas J. Harris, New York; Francis P. Emerson, Boston, and Lee W. Dean, Iowa City, Iowa.

PROCEEDINGS OF THE NEW YORK SESSION

MINUTES OF THE SIXTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW YORK CITY, JUNE 4-8, 1917

(*Continued from page 1768*)

HOUSE OF DELEGATES

Second Meeting—Tuesday Morning, June 5

The House of Delegates met at 9:40 a. m., and was called to order by the chairman.

Supplementary Report of the Committee on Credentials

Dr. D. Chester Brown, Connecticut, chairman, presented a supplementary report of the Committee on Credentials, which was accepted, and those reported were seated as members of the House.

The roll was called, and the secretary reported a quorum present.

The chairman of the House of Delegates then introduced Dr. William Wesley Peter, Shanghai, China, secretary of the Joint Council on Public Health Education of the National Medical Association, the China Medical Missionary Association, and Young Men's Christian Association, who extended the greetings of the China Medical Missionary Association and the National Medical Association to the American Medical Association.

The secretary read the minutes of the previous meeting, which, on motion of Dr. Randolph Winslow, Maryland, were adopted.

Report of the Reference Committee on Reports of Officers

Dr. Horace G. Wetherill, Colorado, chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Your Reference Committee on Reports of Officers offers the following recommendations:

THE PRESIDENT'S ADDRESS

Your committee would recommend to the House of Delegates that the action of President Blue, in appointing a committee to outline recommendations for the best method of utilizing the facilties of the American Medical Association in preparing for war, be endorsed and approved. The emergency was such that we deem the President was well within the exercise of a proper discretion in assuming the responsibility of naming this committee. The House of Delegates should also confirm the action of the committee, consisting of Dr. Arthur Dean Bevan, chairman, Dr. Alexander Lambert, and Dr. John W. Kerr.

REPORT OF THE SECRETARY

Your committee recommends to the House of Delegates that the discretionary action of the secretary, be approved in offering the Surgeon-General of the United States Army, and the Surgeon-General of the United States Navy the services and cooperation of the American Medical Association in any way in which the facilities of the office or of the organization might best serve the medical departments of the federal government. We furthermore suggest to the House of Delegates that it formally and officially offer to the government, through adoption of this recommendation, the services and facilities of the American Medical Association for such assistance as it may be in its power to render hereafter.

REPORT OF THE BOARD OF TRUSTEES

This complete and comprehensive report merits careful study by each member of the House of Delegates. It is quite apparent that serious economies have already become necessary, and it is probable that during the next year even greater economies must be considered. The high cost of paper and other publication supplies, and the imminent decrease in the revenue of THE JOURNAL, create a situation calling for the most careful consideration of future events. Your committee desires to endorse fully and most heartily the measures of economy already adopted by the Board of Trustees in the publication of THE JOURNAL, and particularly we recommend the approval of the action of the Board of Trustees, at its meeting in February, in passing the following resolution:

That all papers read at the annual session be treated as volunteer papers, and that the same be published in full in THE JOURNAL or rejected, or published in abstract as may seem best.

This action will place THE JOURNAL and its editor on a plane with other similar medical publications, and will automatically cut out the publication of much undesirable and reduplicated matter. With reference to the publication of the papers from the Sections on Ophthalmology and Laryngology, Otology and Rhinology in separate journals, we have deferred action until this subject can be considered by the various sections interested, and an expression of opinion be secured from them.

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

Regarding this report, your committee again commends it to the House of Delegates for serious consideration. The report has been prepared with the greatest care, and we unqualifiedly endorse it for adoption in substance, at least, to the House of Delegates. Unquestionably, the adoption of the measures recommended in the report will do much to coordinate the work of the various sections, and to divide the time available for scientific work in such a way as to make it most useful and valuable for those who attend the meetings of the sections. We recommend the adoption of the by-laws and standing rules suggested by the Council, and believe that the adoption of the plan suggested by the Council, as a whole, will make for economy of time, of members and space in THE JOURNAL. We heartily commend to careful consideration the clearly stated matter contained in this report.

COMMITTEE ON RED CROSS MEDICAL WORK

We desire to approve and commend the report of the committee on Red Cross Medical Work. We recommend the House of Delegates to take such action as might help the movement to retain medical students in the medical schools until the course has been completed. The experience in England has shown that this is vital and necessary. We furthermore recommend that some action be taken which may save the existing hospitals in this country such nurses, interns and other medical officers as may be necessary to the efficient operation of the institutions. The other recommendations of this committee on Red Cross work are also approved, and recommended for endorsement by the House of Delegates.

The resolution offered by Dr. Arthur McCormack was considered by your committee and it was decided to recommend to the House of Delegates that a committe of five be appointed by the President to present this memorial to the proper government authorities, provided the memorial is approved by the House of Delegates.

Dr. Arthur T. McCormack, Kentucky, moved that the report be adopted as read. Seconded.

After discussion by Dr. Elmer L. Kenyon, Illinois, the motion was put and carried.

Report of Reference Committee on Legislation and Political Action

Dr. M. L. Graves, Texas, chairman, presented the report of the Reference Committee on Legislation and Political Action, as follows:

The Reference Committee on Legislation and Political Action has carefully considered the report of the Council on Health and Public Instruction, and desires to commend the Council for the excellent work it has done during the past year, particularly with the diminished appropriations at its command. We approve the report of the Council and recommend that the House of Delegates ratify the appointment of the Committee on Child Welfare Work.

The committee desires also to express its appreciation and approval of the work of the various subcommittees of the Council, namely, the report of the Committee on Conservation of Vision, the Committee on Cooperation with the National Education Association, the Committee on Women's and Children's Welfare, and the elaborate report of the Committee on Social Insurance, which contains a large amount of valuable information necessary to the understanding of this subject.

The report of the Council contains two questions requiring action by the House of Delegates, namely, the resolution regarding the use of alcohol, and the resolutions on social insurance. Your reference committee requests more time for the consideration of the resolution on alcohol. The resolutions on social insurance are approved, and we recommend their adoption.

We further recommend that the secretary of the Association be instructed to transmit a copy of these resolutions to each constituent state association and to inform each constituent state association that the Council on Health and Public Instruction is willing to cooperate with the state associations whenever social insurance questions are to be considered by the law-making bodies of the respective states.

Dr. Perry Bromberg, Tennessee, moved the adoption of the report as read.

Seconded by Dr. Miles F. Porter, Indiana, and carried.

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, chairman, presented the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

The Reference Committee on Amendments to the Constitution and By-Laws begs to report as follows:

The following amendment to the Constitution was introduced at the Sixty-Eighth Annual Session of the American Medical Association:

No Trustee shall be eligible to any other elective office, the term of which runs concurrently with the term for which the said trustee has been elected.

The committee recommends its adoption.

The committee recommends the following amendment to Chapter XI, Section 4, paragraph (*c*) by the introduction of the following words, "and in accordance with rules and regulations enacted by the House of Delegates," so that the paragraph shall read:

Secretary.—The secretary shall keep a record of the proceedings of the section in a book provided for such purpose; shall, with the cooperation of the chairman, and in accordance with rules and regulations enacted by the House of Delegates, arrange the program; and shall, at least thirty days before the Scientific Assembly, forward it to the Secretary of the Association for insertion in the official program; and shall perform such other duties pertaining to his office as may be provided by the by-laws of the Association or of the section.

The committee recommends that Chapter XI, Section 12, be amended to read:

NUMBER OF PAPERS ON PROGRAM.—The number of papers, including addresses, on the program of any section shall not exceed six in each unit assigned to the section, by the rules and regulations enacted by the House of Delegates, provided, however, that no section may list more than thirty papers on its program.

The committee recommends that Chapter XI, Section 3, be amended by substituting for the first sentence, which reads: "The election of officers of the several sections shall be the first order of business of the next preceding the final meeting of the section at each Scientific Assembly except when the section holds but one meeting," the following:

ELECTION OF OFFICERS.—The election of officers of the several sections shall be the first order of business of the next preceding the final meeting of the section at each Scientific Assembly, provided, however, that when a section shall hold not more than two meetings at any annual session, these officers shall be elected at the final meeting.

STANDING RULES

The committee recommends the following Standing Rules for the government of the Scientific Assembly:

1. The term "unit" shall signify a single meeting of a session at an annual session.

2. Not more than six numbers shall be listed on the scientific program of any one unit, and further, no section shall list more than thirty papers (the number to which a section is limited by the By-Laws of the Association) at any one annual session, distributed among all the units assigned to it.

3. The sessions of the Scientific Assembly shall be limited at each annual session to the maximum number of units listed in the appended table:

Practice of Medicine	6 units
Surgery, General and Abdominal	6 units
Obstetrics, Gynecology and Abdominal Surgery	6 units
Ophthalmology	6 units
Laryngology, Otology and Rhinology	6 units
Diseases of Children	3 units
Pharmacology and Therapeutics	3 units
Pathology and Physiology	3 units
Stomatology	2 units
Nervous and Mental Diseases	3 units
Dermatology	3 units
Preventive Medicine and Public Health	3 units
Genito-Urinary Diseases	3 units
Orthopedic Surgery	3 units
Gastro-Enterology and Proctology	2 units

4. Those sections to which three or a less number of units are assigned shall hold one meeting on each of the days of the annual session during which section meetings are held.

5. The Council on Scientific Assembly shall apportion the morning and afternoon units at each annual session to the several sections.

The report was considered section by section, and on several motions, duly seconded and carried, they were adopted with the exception of the section distributing the units to the different sections of the Scientific Assembly. This section, on motion of Dr. W. C. Fisher, delegate from the Section on Stomatology, was amended by substituting three units for two units, as recommended by the reference committee.

The motion to amend was duly seconded and carried.

Dr. Horace G. Wetherill, Colorado, moved that the report of the reference committee, as amended, be adopted.

Seconded and carried.

Dr. Floyd M. Crandall, New York, offered the following amendments: Amend Chapter XI, Section 7, by adding the following, "16. Miscellaneous Topics," and amend Chapter VII, Section 7, of the By-Laws, by adding the words:

The Council on Scientific Assembly is authorized to appoint officers for the meetings making up the section on miscellaneous topics.

Dr. Southgate Leigh, Virginia, rose to a point of order. He stated that the House had already adopted the recommendation of the Reference Committee on Reports of Officers which recommended the adoption of the assignment of units to the sections of the Scientific Assembly as reported by the Reference Committee on Amendments to the Constitution and By-Laws, and that the amendment to the report of the Reference Committee on Amendments to the Constitution and By-Laws was in conflict with an action previously taken by the House.

The chairman declared the point well taken.

Dr. Horace G. Wetherill, Colorado, moved a reconsideration of that portion of the report of the Reference Committee on Reports of Officers Distributing the units to the sections, and that the assignments of units made in the amended report of the Reference Committee on Amendments to the Constitution and By-Laws be adopted.

Seconded and carried.

New Business

Under the head of "New Business," Dr. William J. Cruikshank, New York, presented the following preambles and resolutions, which were referred to the Reference Committee on Legislation and Political Action:

WHEREAS, Chapter 7, Section 4, of the By-Laws of the Medical Society of the State of New York has been amended to read: "The Committee on Legislation shall consist of a chairman to be elected by the House of Delegates, and of the chairmen of the legislative committees of the constituent county societies." And

WHEREAS, The Medical Society of the State of New York has shown by the adoption of this amendment that it recognizes the fundamental principle that all questions on medical legislation which may affect the whole state should primarily be referred to the state society, that attempts at handling such questions should not, as heretofore, be left to the spasmodic effort of the unorganized few, and that what is needed for successful operation is a permanent representative organization that shall reach every smallest part of the state; and

WHEREAS, The plan here to be outlined has, for some time, been in operation in the Medical Society of the County of Kings, in the State of New York, and has been found to be effective; therefore be it

Resolved, That the present organization of the legislative committee of the Medical Society of the State of New York, and of the Medical Society of the County of Kings, in the State of New York, be recommended by the American Medical Association to the state and county societies of the several states. And be it further

Resolved, That the plan recommended be as follows: The chairman of the legislative committee of the state society to be chosen, if possible,

from the state capital. The legislative committee of each county society to be so arranged that it shall always consist of a physician from each legislative district. The duty of the chairman of the legislative committee of the county society, by reason of the fact that he is also a member of the legislative committee of the state society, to be, to give to the members of his committee information coming to him, from the chairman of the legislative committee of the state society, to advise them in regard to proposed medical legislation that may need to be combated or furthered, and to get from them information arising from their interviews or correspondence with the legislators of their respective districts.

The duty of the members of the legislative committees of the county societies to be to ascertain the views or position on medical legislative matters as they arise, of the state legislators from whose districts they were appointed and to try to influence these legislators in favor of proper medical legislation against mischievous medical legislation. And further be it

Resolved, That the American Medical Association recommends that the machinery of such an organization be put in operation as soon as possible, believing that its use would result in successfully combating pernicious medical legislation and furthering proper and necessary medical legislation.

Dr. Samuel J. Meltzer, New York, delegate from the Section on Practice of Medicine, offered the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

In noticing with profound gratification the fact that numerous distinguished physicians of our country were among the first to offer their services to the government and to respond to its call to serve in their capacity as medical men on the battlefields of our allies in Europe, the American Medical Association, at its Sixty-Eighth Annual Session, expresses herewith its confidence to the entire medical profession that all its members will stand by the government in its present national need and offer willingly their services whenever they are called on and in whichever capacity they are capable of rendering them; at the same time the Association wishes to remind the members of the profession that the duties and rights of medical men are clearly defined and protected by the international Hague Conventions, of which our country is one of the signatory powers, and expresses herewith the hope that the standard of the actions of the medical men of our country during the war, wherever executed, will be of such a character that it will bring honor to our profession as well as to our country.

Dr. R. M. Funkhauser, Missouri, rose to a question of personal privilege and asked what disposition, if any, had been made by the Judicial Council of a request which he had presented to the House of Delegates at the Detroit session through the Reference Committee on Amendments to Constitution and By-Laws.

He now desired to make an additional inquiry and asked why one, who is or has been a member of the organization, should not be required to obtain membership at a new location on a transfer rather than by application *de novo*?

The chairman of the House of Delegates directed the secretary to bring this question to the attention of the Judicial Council, with the request that the Council report concerning the matter at the next meeting of the House of Delegates.

Dr. Arthur T. McCormack, Kentucky, presented the following resolution, which was referred to the Reference Committee on Legislation and Political Action:

WHEREAS, The protection of the national health is a measure of vital importance in peace and especially in war; and

WHEREAS, The governor of the State of New York by his untiring and public-spirited efforts, aided by the New York Academy of Medicine, has proffered the New York quarantine, etc., to the federal government; and

WHEREAS, Congress has not yet appropriated the funds which are necessary to complete the transfer of said New York quarantine; therefore, be it

Resolved, That the House of Delegates of the American Medical Association urges on Congress the importance of making immediately the appropriations with which to effect the transfer of the New York quarantine to the national government.

Dr. Arthur T. McCormack, Kentucky, asked that the privileges of the floor be extended to Dr. Seale Harris, Alabama, to permit him to discuss a question relative to food conservation.

Dr. C. L. Stevens, Pennsylvania, moved that Dr. Harris be granted five minutes.

Seconded and carried.

Dr. Harris then addressed the House, suggesting the following resolution; which was received by the House and referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, Those in position to know warn us that the American people are facing an alarming food shortage, particularly of meats and of wheat products; and

WHEREAS, If the laboring classes are deprived of these necessities to health and life, tuberculosis and many other diseases will increase very rapidly—it is said that tuberculosis has increased 500 per cent. in Berlin since meats and fats have almost disappeared from the German markets, and that in France the "white plague" and other diseases have increased enormously since the war began; and

WHEREAS, In the United States diseases of the arteries, kidneys, heart and brain (the degenerative diseases) have increased about 20 per cent. in the last thirty years, due partly to overeating, particularly of meats; and

WHEREAS, The food problem both among those who may be deprived of meats and breads, and among the prosperous who may be shortening their lives by overeating, is a question of vital importance to the health of the nation; and

WHEREAS, The U. S. Food Commission, with a patriot and an American of such distinguished ability as Mr. Herbert Hoover at its head, has wonderful opportunities for controlling food prices and in educating the public regarding food values and rational eating; therefore be it

Resolved, 1. That the American Medical Association in convention assembled in New York City, June 5, 1917, recognizing the food problem as a public health question, urges the people of the United States to conserve the food supply by eating less meat (many authorities say that it is harmful to eat more than one small portion of meat a day) and by eating more of corn, rice and barley products as substitutes for foods made from wheat.

2. That the U. S. Senate and House of Representatives be urged to expedite pending legislation, giving the Food Commission powers and means to control prices and to handle the food supply as it may think best for the American people.

3. That the Food Commission be requested to appoint a scientific committee composed of physicians and other experts on diet and nutrition to act, without pay, in an advisory capacity; and to provide means for said scientific committee to carry on a campaign of education to inform the public regarding the normal nutritional needs of the human body, and of the dangers from overeating, as well as to warn the public that high prices will deprive both the poor in our country and our allies in Europe of meats, bread and other foods that are necessary for the health, efficiency and even life itself.

4. That copies of these resolutions be sent to President Woodrow Wilson, Food Commissioner Herbert Hoover, the U. S. Senate and House of Representatives, and that copies be furnished the press.

Dr. Horace G. Wetherill, Colorado, offered the following amendment, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

To amend Section 3, Chapter VII, of the By-Laws, adding under classification "(f)" to the standing committees the words "Executive Committee." That the following be added as Section 9, and the present sections from 9 on to be renumbered.

THE EXECUTIVE COMMITTEE FOR THE HOUSE OF DELEGATES.—The Executive Committee shall consist of the President of the Association, the chairman of the House of Delegates, the secretary and the chairmen of the Board of Trustees, of the Judicial Council, of the Council on Health and Public Instruction, of the Council on Medical Education, and of the Council on Scientific Assembly.

In the event of death, resignation or removal of any of these the place so made vacant on the Executive Committee shall be filled by the one authorized to perform the duties of the respective office. The Executive Committee shall act for the House of Delegates in the interval between the annual sessions of the House, when the House itself is not in special session.

All actions taken by the Executive Committee, in order that they be adopted, must be supported by not less than three fourths of the members of the Executive Committee.

Also, in order to prevent conflicts, delete from Chapter VI, Section 1, sentence near the bottom of page 14, reading as follows: "In case of a vacancy in the office of Treasurer or Secretary, on account of death or otherwise, the vacancy shall be filled by the Board of Trustees until the next annual session of the House of Delegates," and the last sentence of Section VI to read, "During the intervals between the sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees constituted by the action of the House."

Dr. Horace G. Wetherill, Colorado, offered the following amendment to Chapter V, Section 5, of the By-Laws, by cutting out the words "or the General Manager," which was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. John MacDiarmid, Florida, offered the following communication, which was referred to the Reference Committee on Miscellaneous Business:

Hon. Woodrow Wilson, Washington, D. C.:

The American Medical Association, in convention assembled, representing more than 70,000 physicians of the United States, commending your patience as long as patience was a virtue, endorses your manly and patriotic action at this critical hour of our national life, when German autocracy, ignoring the common rights of man, is waging inhuman war upon democracy and humanity, and pledges to you our hearty and active cooperation.

Dr. Floyd M. Crandall, New York, offered the following amendment to Article 9, Section 1, of the Constitution, which will lie over until the next annual session of the House of Delegates:

The Committee on Amendments to the Constitution and By-Laws submitted the following amendment to Article 9, Section 1, of the Constitution:

Amend by striking out the words "Chairman and Vice Chairman of the House of Delegates," and substituting the words "Speaker and Vice Speaker of the House of Delegates."

Report of the Reference Committee on Medical Education

Dr. William S. Lalor, New Jersey, chairman, presented the report of the Reference Committee on Medical Education, as follows:

Your committee, to which the report of the Council on Medical Education was referred, reports as follows:

We recommend that the report be endorsed as a whole. No one can read and study this report and consider the results obtained without being impressed with the profound influence of the Council's work on the present and future welfare of the medical profession in this country. The reasonably high standards of preliminary education which have been established insure well qualified students who, with the improved training now obtainable in the majority of medical colleges, cannot fail to be a credit to the profession they have adopted and of greater service to the public.

It is pleasing to note that during the last several years so large a proportion—over 70 per cent.—of all medical graduates are from the Class A medical schools, and are in position to render service of a high order to the government in the present national crisis. Your committee endorses the Council's statement that there should be no lowering of educational standards or shortening of the medical course, although the emergency may require certain changes in methods of procedure.

The Council should be commended on the establishing of the Student's Register, which not only is a permanent record of the qualifications of all medical students but also enables the Council to know definitely whether medical schools are upholding reasonable standards for admission.

The Council's list of approved hospitals is of much service to medical graduates in obtaining internships. This work should be continued so that other worthy hospitals may be included in subsequent lists. Your committee believes that a most important and urgent work remaining to be accomplished by the Association is a more extensive investigation of the hospitals as to their ability to furnish intern training of a sufficient value to be accepted by state licensing boards as the final year of the medical course. Your committee recommends that an appropriation of $2,500 each year for three years be made for this purpose.

Your committee calls especial attention to Table 5, on page 176. This shows that of the 3,877 physicians coming from colleges of known classification who were licensed during 1916, nearly 80 per cent. were graduates of Class A colleges. We recommend that the attention of each state medical society be called to the record of their state.

Your committee recommends that the action taken by the Council in its ratings of medical colleges be approved and recommends the publication of the ratings with the changes recommended by the Council.

The committee wishes to commend the Council on the splendid results of its work during the last fourteen years.

William Smith Lalor, Chairman.
L. W. Littig.
Dean Lewis.

Dr. Perry Bromberg, Tennessee, moved that the report be adopted.

Seconded by Dr. C. E. Cantrell, Texas, and carried.

Report of Reference Committee on Hygiene and Public Health

Dr. W. C. Rucker, District of Columbia, chairman, presented the report of the Reference Committee on Hygiene and Public Health, as follows:

The committee unanimously endorses the resolution presented by Dr. Arthur T. McCormack and recommends its adoption.

The committee also considered the resolution relative to food conservation. The committee feels that inasmuch as this matter has been considered by Congress, and the national government is taking steps in this direction, it is inexpedient to proceed farther with the matter at present, and the committee so recommends to the House, and advises that the communication be laid on the table.

On motion, duly seconded and carried, the recommendations of the committee were concurred in.

Dr. Oscar Dowling, Louisiana, a member of the Board of Trustees, called the attention of the House of Delegates to the practice, not uncommon among physicians, of giving letters of recommendation and testimonials relative to the therapeutic merits of drugs and combinations of drugs without careful scientific investigation. He made the suggestion that this practice should be condemned by an organization of scientific physicians.

The chairman of the House of Delegates requested Dr. Dowling to present his suggestion in writing for the consideration of the House.

Dr. H. M. Brown, Wisconsin, addressed the House on the question of taking action relative to memorializing Congress, praying that it revoke the patent rights of salvarsan and neosalvarsan.

Dr. C. E. Cantrell, Texas, suggested the extending of the memorial to cover other patented pharmaceutical products. The question was also discussed by Dr. Floyd W. McRae, Georgia.

At the suggestion of the chair, a motion was made, duly seconded and carried, authorizing the appointment of a special committee of three to frame a resolution covering this question, and directing the secretary to transmit the resolution drafted by the special committee to the Reference Committee on Hygiene and Public Health. The committee appointed consisted of Drs. H. M. Brown, chairman; C. E. Cantrell, and F. W. McRae.

The committee reported the following resolutions, which were transmitted to the reference committee as directed:

Resolved, That the 86,000 medical men, represented by the House of Delegates of the American Medical Association, urge on the Congress of the United States the imperative necessity of immediate steps being taken to abrogate the German patents on the manufacture of salvarsan in this country, to the end that the people of the United States may have at their command an available means for rapidly controlling the spread of syphilis. Be it further

Resolved, That Congress is urged to consider the abrogation of other important patents now held by Germans which interfere with the manufacture of drugs useful to the people of the United States.

The Committee on Credentials presented, through its chairman, Dr. D. Chester Brown, Connecticut, the following amendment to the rules for the guidance of the Committee on Credentials:

To be substituted for Paragraph 1 of the rules adopted June 6, 1912: "Credentials shall be of two parts. The first part shall be sent to the office of the secretary of the American Medical Association by the secretary of the constituent association, 'not later than seven days prior to the first day of the first meeting of the House of Delegates,' and shall be a list of delegates 'and alternates' for that association."

This amendment was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

On motion, duly seconded and carried, the House of Delegates then adjourned to meet Thursday, at 2 p. m.

Third Meeting—Thursday Afternoon, June 7

The House of Delegates met at 2 p. m., and was called to order by the chairman.

Dr. D. Chester Brown, Connecticut, chairman, presented a supplementary report of the Committee on Credentials.

Dr. C. E. Cantrell, Texas, moved that the report be adopted, and the delegates reported be seated.

Seconded and carried.

The secretary called the roll and 100 delegates responded. Later twelve additional delegates reported their presence.

The chairman announced a quorum present.

Dr. E. Eliot Harris, New York, called the attention of the House to the presence of Dr. Abraham Jacobi, an ex-President of the Association.

Dr. Jacobi addressed the House, expressing his appreciation of the opportunity to look into the faces of many of the delegates whom he had known before and to shake hands with them.

The minutes of the previous meeting were read and approved.

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Election of Officers

The next order of business being the election of officers, the House proceeded to an election, which resulted in the choice of the following:

President—ARTHUR DEAN BEVAN, Chicago.

First Vice President—EDWARD H. BRADFORD, Boston.

Second Vice President—JOHN MCMULLIN, U. S. Public Health Service, Washington, D. C.

Third Vice President—LAWRENCE LITCHFIELD, Pittsburgh.

Fourth Vice President—HOLMAN TAYLOR, Fort Worth, Tex.

Secretary—ALEXANDER R. CRAIG, Chicago.

Treasurer—WILLIAM ALLEN PUSEY, Chicago.

Chairman of the House of Delegates—HUBERT WORK, Pueblo, Colo.

Vice Chairman of House of Delegates—DWIGHT H. MURRAY, Syracuse, N. Y.

Members of the Board of Trustees—PHILIP MARVEL, Atlantic City, N. J.; W. T. SARLES, Sparta, Wis.; H. BERT ELLIS, Los Angeles. The resignation of W. T. COUNCILMAN, Boston, having been received and accepted with regrets, WENDELL C. PHILLIPS, New York, was selected to fill the unexpired term.

The House approved the following nominations of the President:

Judicial Council—RANDOLPH WINSLOW, Baltimore.

Council on Health and Public Instruction—WALTER B. CANNON, Boston.

Council on Medical Education—WILLIAM PEPPER, Philadelphia, and to fill the place made vacant by the election of Arthur D. Bevan to the presidency, H. GIDEON WELLS, Chicago.

Council on Scientific Assembly—E. S. JUDD, Rochester, Minn.

The President, Dr. Charles H. Mayo, then addressed the House and said that nearly all great bodies looked after the destitute, those that were rendered so by sickness or those who left their families destitute. He knew of men in the medical profession who were paralyzed, and who lived on a mortgage of their life insurance which was meant for the use of their families. He hoped and believed that this year the American Medical Association would start the nucleus for a fund that can be used by the Board of Trustees for the care of such members of the profession and their families as were deserving.

The secretary presented a list of applicants for associate fellowship endorsed by the Judicial Council, the Section on Stomatology, the Section on Pharmacology and Therapeutics, the officers of the Section on Pathology and Physiology, the officers of the Section on Preventive Medicine and Public Health, and a nomination for Honorary Fellowship from the Section on Orthopedic Surgery, the latter to be approved by the Council on Scientific Assembly.

It was moved that the secretary be authorized to cast a ballot of the House in each instance in which the applicant is not eligible for membership in the state association of the state in which he resides, and provided no objection to the applicant is filed by the officers of such state association.

Seconded and carried.

Address by the President of the Association

At this juncture, the business of the House was suspended. The chairman introduced Dr. Bevan, President Elect, who said:

Mr. Chairman and Members of the House of Delegates: You are so busy this afternoon that you do not want to hear me talk, and I have very little to say.

I want to thank you for the great honor that you have conferred on me in electing me President of the American Medical Association. Frankly, however, I regard it rather as an expression of confidence and in honor of the movement in connection with medical education that was initiated fifteen years ago with which I have been fortunately actively identified. I have been tremendously impressed with the possibilities of the American Medical Association from my experience in the work of the Council on Medical Education. I have been impressed with the possibilities that when the organized profession of this country seriously undertakes to carry out certain reforms, it will be successful. This is shown in the splendid work of THE JOURNAL and in the Council on Pharmacy and Chemistry and in many other activities of the Association.

I am a member of several special societies, but my membership in the American Medical Association means more to me than does my connection with any other medical organization in this country, and I think it means more for any man in American medicine. (Applause.)

Medicine is not only a science, but it is today one of the great functions in civilization, and the American Medical Association represents the organized profession in this country. I believe it has a very important part to play in the future development of this country in many ways, and I think if we all realize what can be done by an organized profession and work together intelligently, we shall not only accomplish a great deal of good for the medical profession and for medicine, but for the people of the United States. (Applause.)

The Health of Our Soldiers

Dr. Frank Billings, Illinois, rose to a question of personal privilege which was granted, and said:

Any one who has been in touch with the conditions of health of our recruits, both in the navy and army, since we are in a state of war, must have been impressed with the fact that there is something wrong. At different places we hear fault found with our army medical department, and with the navy medical department. There are scandals regarding certain epidemics of cerebrospinal meningitis, of scarlet fever, of measles, and pneumonia among the young men called to the service, and now that conscription is with us and 500,000 recruits are to be concentrated in camps, we ask ourselves the question of what is to become of these young men. We have not far to go, if we understand things, for an answer. In times of peace, even the medical departments of the army and navy have not the power commensurate with the responsibilities, and now in time of war these responsibilities are greater and their power is not greater but less if anything. Do you want me to give you one or two concrete examples?

Since registration has taken place and conscription faces us, contracts have been let for sixteen concentration camps and barracks. These barracks are to be of wood and steel, rooms holding 600 soldiers, and the amount of space allotted to each is 300 cubic feet. This matter is in charge of the quartermaster's department. They may reach the surgeon-general; he may O. K. it or disapprove of it, but he cannot stop it. The army medical officers themselves cannot demand or expect to receive any change in this routine. They must depend on us as civilians to bring about a change through the influence we may have with the administration at Washington. We must not act hastily. We must formulate methods. At this time of war, for instance, the war college should have a representative in it of the medical department. It has not now and never has been given one. We conceive that the health of our boys both in the navy and in the army, in recruiting stations, and in the field, is one of the most important functions and powers of war. We must do something to help our three surgeons-general. I do not want further to take up your time, but simply intimate this to you. They are glad to receive help. We want to give them help in the right way, and after a conference with officers of the army and with Dr. Welch, who has made examinations of certain of these camps, I ask that this House appoint a committee to draft resolutions to be forwarded to the President of the United States. I do not ask that this be done now. We should have a commission or committee with power, after a conference with Surgeon-General Gorgas, Surgeon-General Braisted, and Surgeon-General Blue, to formulate resolutions to the President that may be helpful in obtaining the power they need to guard the health of our soldiers.

Dr. C. E. Cantrell, Texas, moved that a committee of five, with power, be appointed by the Chairman of the House, for this purpose.

Seconded and carried.

Place of Annual Session

The next order of business being the selection of a place and fixing the time for the annual session of 1918, Dr. A. B. Walker, Ohio, moved that the privileges of the floor be extended to Dr. E. O. Smith, Cincinnati, president of the Ohio State Medical Association.

Seconded and carried.

Dr. Smith extended a warm invitation for the Association to hold its next annual meeting in Cincinnati.

Dr. Charles J. Whalen, Illinois, extended an invitation to the Association to hold its next meeting in Chicago.

Dr. E. Eliot Harris, New York, moved that no further invitations be received, and the House proceed to a ballot.

Seconded and carried.

It was suggested that if unanimous consent be accorded, the place of the next annual session could be determined promptly by a rising vote.

Unanimous consent having been obtained, a rising vote was then taken, which resulted in Chicago being selected.

Dr. J. B. Blake, Massachusetts, moved that the time of meeting be left to the Board of Trustees.

Seconded and carried.

Report of Reference Committee on Miscellaneous Business

Dr. J. B. Blake, Massachusetts, Chairman, presented the following report of the Reference Committee on Miscellaneous Business:

Your committee has the honor to present the following report:

Two matters were referred to this committee and have received careful consideration. The first, a resolution offered by Samuel J. Meltzer, delegate from the Section on Practice of Medicine, for which your Reference Committee recommends the adoption of the following substitute:

In noticing with profound gratification the fact that numerous distinguished physicians of our country were among the first to offer their services to the government and to respond to its call to serve in their capacity as medical men on the battlefields of our allies in Europe, the American Medical Association, at its Sixty-Eighth Annual Session, expresses herewith its confidence to the entire medical profession that all its members will stand by the government in its present national need and offer willingly their services whenever they are called on and in whichever capacity they are capable of rendering them; and that wherever executed, their services will be of such a character that they will bring honor to our profession, as well as to our country.

The second, a communication, presented by John MacDiarmid, Florida, is as follows:

Hon. Woodrow Wilson, Washington, D. C.: The American Medical Association, in convention assembled, representing more than eighty thousand physicians of the United States, commending your patience as long as patience was a virtue, endorses your manly and patriotic action at this critical hour of our national life, when German autocracy, ignoring the common rights of man, is waging inhuman war on democracy and humanity, and pledges to you our hearty and active cooperation.

The committee recommends its adoption.

JOHN BAPST BLAKE,
ALEXIUS McGLANNAN,
HARRY P. RITCHIE,
D. E. McGILLIVRAY.

Dr. Arthur T. McCormack, Kentucky, moved that the report be adopted.

Seconded and carried.

Tribute to Alexander Lambert

Dr. Arthur T. McCormack, Kentucky, asked unanimous consent, which was granted, to present the following personal tribute to Major Alexander Lambert, of the Medical Reserve Corps of the United States Army, who is about to depart for oversea duty:

Dr. Alexander Lambert, *Sir*:—You came to the House of Delegates many years ago, already the honored son of your illustrious father, famed from infancy, into the most cherished traditions of the profession. You have added dignity to the state you have so well represented by constantly and effectively contending for all that is best for the physicians of America, and for the people whom they serve.

A true physician yourself, we recognize your numerous contributions to the science of medicine. It is unnecessary, here, to enumerate them; but because of its tremendous practical importance, as a matter of restoration to healthy usefulness and self-respect of so large a class of unfortunates, we especially congratulate you on your success in devising, perfecting and giving to the profession, and the world, a successful treatment of drug and alcohol addicts.

Recognizing your sense of fairness, your tact, your correct and accurate perception of justice, your colleagues long ago chose you as the Chief Justice of the Supreme Court of Medicine—the Judicial Council of the American Medical Association. You have occupied the position with dignity and honor, and, through your broad conception of its functions, you have advanced not only the popular but also the professional conception of the duties of the physician to himself and to the state, and of the state toward safeguarding the health of all those who by productive labor support it.

Bred in the principle of medicine, you have constantly maintained its highest standards. It is with a deep feeling of real pride, therefore, that we, your colleagues of the House of Delegates of the American Medical Association, recognized you as our special representative with our armed forces overseas in this war, in which justice, equity, right—all three things, Sir, which you, in your own person, so ably represent, are the causes for which our country and its allies fight.

We bid you Godspeed, and in your firm hand and your true heart we confidently place the guardianship of our honor, knowing that it is safe.

On motion, duly seconded and carried, the House concurred in the sentiment expressed in Dr. McCormack's communication and directed that it be spread on the minutes.

Dr. Alexander Lambert was called to the platform, was warmly received, and said:

Gentlemen: I am going to new fields. I will do my best to live up to your good opinion of me, and I thank you. (Applause).

Supplementary Report of the Judicial Council

Dr. Alexander Lambert, New York, chairman, presented the following supplementary report of the Judicial Council:

Relative to the inquiry submitted by Dr. R. M. Funkhouser, Missouri, as to what, if anything, had been done in connection with the subject which Dr. Funkhauser presented to the Reference Committee on Amendments to the Constitution and By-Laws which was submitted to the House of Delegates at the second meeting of last year's annual session:

The following amendment to Chapter VIII, Section 6, of the By-Laws was presented to the chairman of the committee yesterday by Dr. Robert M. Funkhauser of Missouri. As it was not presented to the House of Delegates, it could not be acted on. The committee, however, considered the question at considerable length and decided to present it to the House at this session.

"No person can become an Associate Fellow who can be a member of the American Medical Association in the regular way."

The Judicial Council is of the opinion that there should be no change in the by-laws defining and regulating Associate Fellowship.

In reply to the inquiry Dr. Funkhauser submitted at this session, there are doubtless instances of illegal membership in the American Medical Association, unknown and unrecognized, many of them occasioned by the migration of physicians from state to state, and the obtaining of membership at the new location to which these physicians have gone. This has come about because the procedure defined in the by-laws and the standing rules is not carefully followed, and is usually due to the neglect to obtain a transfer card from the society the member has left to the society at his new location. Frequently, unpaid dues are left behind and yet the physician is given membership at his new location. This causes much confusion, and is due to the failure of the societies to insist on the applicant showing a clear record from the society he has left. The Judicial Council feels that the confusion is due to failure to comply with existing by-laws and standing rules, and that it is unwise to add new rules and regulations to govern this transfer of membership from one society to another until public opinion in component societies enforces the fulfilment of the already existing rules.

The Judicial Council has authorized the following reply to be sent to the official communication received by this House of Delegates from the Mississippi State Medical Association:

In accordance with the advice already mailed to you, your letter of May 17 was transmitted to the House of Delegates of the American Medical Association at the opening meeting of the 1917 annual session. On motion, duly seconded and carried, the House referred your communication to the Judicial Council for a reply.

The Judicial Council at a meeting held in New York City, June 5, took this official communication from a constituent association of the American Medical Association under advisement and after careful deliberation begs leave to reply.

The careful reading of the section of the by-laws giving appellate jurisdiction to the Judicial Council will show that the only matters which can be appealed to the Judicial Council are questions of law and procedure, not of fact. This leaves the question of discipline and the questions of fact concerning whether or not a member should be disciplined where it belongs, in the county societies, where it has always been. The appellate jurisdiction given to the Judicial Council in simple language means this, that any member of a county society or state association—any member of the American Medical Association—may appeal to the Judicial Council if in the course of some dispute he is not given what he considers to be his just rights in questions of law or procedure.

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The qualifications of membership in county societies are not involved in this question at all, because only those already members of the association may avail themselves of the protection of this appeal.

If the appellate powers of the Judicial Council are contrary to democratic principles, the concept of democratic principles, as held by your honorable body, is at variance with the accepted concept of fair play. The Judicial Council of the American Medical Association believes that the preambles and resolutions transmitted to the House of Delegates by you are based on a misconception of the appellate powers actually vested in the Judicial Council. The Judicial Council believes that when its appellate jurisdiction is accurately comprehended by the Mississippi State Medical Association, the wisdom of the existence of these appellate powers will be fully recognized.

Dr. Frederick L. Van Sickle, Pennsylvania, moved that the report be adopted.

Seconded and carried.

Report of Reference Committee on Legislation and Political Action

Dr. M. L. Graves, Texas, chairman, presented the report of the Reference Committee on Legislation and Political Action, as follows:

The resolution regarding recommendations to the constituent state association proposing a plan for the appointment of committees on legislation and political action, has been considered by the committee, and inasmuch as the plan has not been in operation for a sufficient length of time to establish its effectiveness, your committee recommends that this resolution be referred to the Council on Public Health and Instruction.

The resolution to memorialize Congress and urge the appropriation of funds immediately to take over the New York quarantine by the national government was referred to this committee. We learn that the same resolution has already been considered and reported by the Reference Committee on Hygiene and Public Health, and inasmuch as the recommendation of that committee meets with the approval of this committee, and the House has already acted on same, it would appear that no further action is necessary.

The following resolution on alcohol, submitted by the Council on Health and Public Instruction, has been gravely considered by your committee:

WHEREAS, It is the unanimous opinion of the Council on Health and Public Instruction of the American Medical Association that alcohol has no drug value, either as a stimulant, as a tonic, or as a therapeutic agent, and that it has no food value; and

WHEREAS, Its use as a beverage or as a therapeutic agent is detrimental rather than beneficial to the individual; therefore, be it

Resolved, That the House of Delegates of the American Medical Association, at its Sixty-Eighth Annual Session, declares it is opposed to the use of alcohol by individuals either as a medicine or as a beverage; and be it further

Resolved, That its use in medicine is permissible only in the preparation and preservation of pharmaceutical products.

Since the first premise of these resolutions expresses an opinion held by the Council, and since the expressions of opinion from numerous members of the House and the Association lead us to the conclusion that the status of alcohol in medicine is still undetermined, your committee begs to amend the resolutions by substituting the following:

WHEREAS, We believe that the use of alcohol as a beverage is detrimental to the human economy, and

WHEREAS, Its use in therapeutics, as a tonic or a stimulant or as a food has no scientific basis, therefore be it

Resolved, That the American Medical Association opposes the use of alcohol as a beverage, and be it further

Resolved, That the use of alcohol as a therapeutic agent should be discouraged.

It was moved that the report be adopted. Seconded.

Dr. R. A. Hatcher, New York, delegate from the Section on Pharmacology and Therapeutics, moved to substitute the following resolution for the resolution on alcohol offered by the Reference Committee on Legislation and Political Action, and advised the House that the substitute which he offered was presented at the direction of the Section on Pharmacology and Therapeutics after having been adopted by that section:

The Section on Pharmacology and Therapeutics instructs its delegates to the House of Delegates that it is the sense of this section that the question of the therapeutic value of alcohol which has been long in dispute remains yet undetermined, and that hasty action taken in the stress of present circumstances would not be wise, and would not reflect fully the best therapeutic and pharmacologic opinions.

Furthermore, while recognizing the possible need of prohibition of the use of alcohol as a measure of public safety, it would ask that the two questions be considered separately on their respective merits.

After discussion by Drs. Samuel J. Meltzer, New York; R. A. Hatcher, New York; Walter T. Williamson, Oregon; Stewart R. Roberts, Georgia; Cyrus L. Stevens, Pennsylvania; Arthur T. McCormack, Kentucky, and George A. Moleen, Colorado, the chairman put the substitute motion, which was lost.

Dr. E. Eliot Harris, New York, moved to amend by striking out from the resolution offered by the Reference Committee on Legislation and Political Action all that relates to the therapeutic use of alcohol. Seconded.

After discussion by Dr. M. L. Graves, Texas, the amendment was put and lost.

The motion to adopt the report of the Committee as presented was put and carried.

Report of Reference Committee on Hygiene and Public Health

Dr. Arthur T. McCormack, Kentucky, presented the report of the Reference Committee on Hygiene and Public Health.

The Reference Committee on Hygiene and Public Health reports on the resolution offered by Dr. H. M. Brown, Wisconsin, and recommends the following substitute for the resolution presented:

Resolved, That the American Medical Association urges on the Congress of the United States the imperative necessity of immediate steps being taken to abrogate all the German patents on the manufacture of salvarsan and allied products in this country, to the end that the people of the United States may have at their command an available means for rapidly controlling the spread of syphilis.

The following preambles and resolution have come to the reference committee from the Section on Preventive Medicine and Public Health, with the endorsement of that section and are recommended for adoption by the House of Delegates:

WHEREAS, The protection of the national health is a matter of paramount importance, particularly at the present time, and

WHEREAS, To accomplish this it is necessary that there be a close integration of all the health agencies of the nation, the states and the municipalities, therefore, be it

Resolved, That the Section on Preventive Medicine and Public Health urges the House of Delegates to memorialize Congress to the end that Senate Joint Resolution No. 63 be speedily enacted into law.

Your committee reports recommending the adoption of a second set of preambles and resolutions which have been adopted by the Section on Preventive Medicine and Public Health and are transmitted through your reference committee. These resolutions are as follows:

WHEREAS, Venereal infections are among the most serious and disabling diseases to which the soldier and sailor are liable; and

WHEREAS, They constitute a grave menace to the civil population; and

WHEREAS, The Congress of the United States has authorized the President, and has empowered and directed the secretary of war to control prostitution and alcohol within effective zones surrounding all military places; and

WHEREAS, The Council of National Defense has adopted resolutions outlining a general policy for the combating of venereal diseases; and

WHEREAS, A grave responsibility rests on the civil population, and particularly the medical profession, for participation in making effective these and other measures for the eradication of venereal diseases; therefore, be it

Resolved, That the American Medical Association endorses the actions of Congress and the Council of National Defense and commends the following as the basis for a program of civil activities:

1. That sexual continence is compatible with health and is the best prevention of venereal infections.

2. That steps be taken toward the prevention of venereal infections through the prevention of prostitution, and by the provision of suitable recreational facilities, the control of alcoholic drinks, and other effective constructive measures.

3. That plans be adopted for centralized control of venereal infections through special divisions of the proper health and medical services.

4. That the hospitals and dispensaries be encouraged to increase their facilities for early treatment and follow-up service for venereal diseases as a measure of national efficiency.

5. That the members of the medical profession be urged to make every effort to promote public opinion in support of measures instituted in accordance with these principles of action in the control of venereal diseases.

A third set of preambles and a resolution adopted by the Section on Preventive Medicine and Public Health are herewith transmitted, and action will be called for subsequently during this meeting.

These preambles and resolutions are as follows:

WHEREAS, Preventive medicine is a subject of growing importance, and

WHEREAS, The section on Preventive Medicine and Public Health of the American Medical Association brings many who are interested in public health work to its meetings, and

WHEREAS, The consideration of special subjects relating to preventive medicine requires additional time rather than restricted time, and

WHEREAS, It is of the utmost importance that preventive medicine be not alienated from the other branches of medicine, and be dissipated among a multiplicity of special health organizations, therefore, be it

Resolved, That the Section on Preventive Medicine and Public Health hereby petitions the House of Delegates that its work at the annual sessions be extended to six units, and that it be permitted to hold two meetings daily until its work is completed.

On several motions, duly seconded and carried, the several sections of the report were adopted.

Supplementary Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, chairman, presented the following supplementary report of the Reference Committee on Amendments to the Constitution and By-Laws:

The following communication, presented by Dr. R. M. Funkhouser of St. Louis was referred to this committee.

Dr. R. M. Funkhouser of St. Louis moved that the delegates to the next meeting of the A. M. A. be instructed to take up the question of transfer of members from one unit society of one state to a unit society of another, as there are cases where members of one state, delinquent or not, go to another state without a transfer card and illegally become members of a unit society in another state. This subject should be brought to the attention of the proper authorities at the coming meeting of the A. M. A., and properly settled. No member of a unit society should be permitted to join or should be accepted in a unit society of another state unless the said member desiring membership in another state shall conform to the laws which demand all dues be paid and a proper transfer be obtained from the unit society from which the transfer is desired.

After prolonged deliberation, the committee decided that in its judgment the matter was completely covered by Chapter VIII, Section 3, of the By-Laws.

It was voted, however, to refer the matter to the Judicial Council.

It was further voted that in its judgment, all matters pertaining to the transfer of membership should be referred to the Judicial Council.

The committee recommends that Chapter V, Section 5, of the By-Laws be amended by striking out the words "Or the General Manager," and substituting the word "or" between the words "Delegates" and "the," so that the section shall read: "And shall perform such other duties as may be directed by the House of Delegates, or the Board of Trustees."

The Committee on Registration of Delegates presented, through its chairman, Dr. D. Chester Brown, the following amendment to the rules for the guidance of the Committee on Credentials:

To be substituted for Paragraph 1 of the rules adopted June 6, 1912:

Credentials shall be of two parts. The first part shall be sent to the office of the secretary of the American Medical Association by the secretary of the constituent association, "not later than seven days prior to the first day of the first meeting of the House of Delegates," and shall be a list of delegates "and alternates," for that Association.

The committee recommends the adoption of this rule.

The following amendment to the By-Laws was submitted to the House of Delegates at the meeting of June 5:

Amend by adding to Chapter XI, Section 1, the following words: "16 Miscellaneous Topics."

Amend Chapter VII, Section 7, by adding the words: "The Council on Scientific Assembly is authorized to appoint officers for the meetings making up the section on miscellaneous topics."

The committee recommends the adoption of this amendment.

The Committee on Amendments to the Constitution and By-Laws submitted the following amendment, Chapter VII, Section 11, of the By-Laws:

Amend by adding the words "(9) A Committee on Sections and Section Work, to which shall be referred all matters relating to the sections and the section work. Members of the Council on Scientific Assembly shall be members *ex officio* of this committee."

The Committee on Amendments to the Constitution and By-Laws submitted the following amendment to Article 9, Section 1, of the constitution.

Amend by striking out the words "Chairman and Vice Chairman of the House of Delegates," and substituting the words "Speaker and Vice Speaker of the House of Delegates."

The reference committee has received from Dr. Oscar Dowling the following memorandum:

Add Principles of Medical Ethics:
Chapter I, Section IV—Judicial Council—Authority
For complaints or violations of

Chapter II, Article I, Section 6—The Judicial Council shall have original jurisdiction.

Chapter II, Section 6, add last line following manufacture, or represent or exploit or promote (for financial gain or other purpose) their use in any way.

This memorandum having been received too late to be acted on by the committee, the chairman moved that it be referred to the Judicial Council for consideration and report.

On several motions, which were duly seconded and carried, the several sections of the report were adopted.

Dr. George A. Moleen, Colorado, moved the adoption of the report as a whole.

Seconded and carried.

Dr. Floyd M. Crandall, New York, presented the following resolution, which was duly seconded and carried:

Resolved, that the secretary be empowered to arrange and renumber paragraphs of the Constitution and By-Laws as may be necessary to bring them into harmony with existing sections.

The chair announced the following committee called for by the action of the House in response to the remarks made by Dr. Billings:

Dr. Charles H. Mayo, Minnesota; Dr. William H. Welch, Maryland; Dr. Victor C. Vaughan, Michigan; Dr. Samuel Lambert, New York, and Dr. Frank Billings, Illinois.

Report of Reference Committee on Reports of Officers

Dr. Horace G. Wetherill, Colorado, chairman, presented the report of the Reference Committee on Reports of Officers:

Your Committee on Reports of Officers desires to submit the following:

On further consideration of the matter held in abeyance in our previous report, relating to the formation of special journals in ophthalmology and otolaryngology, we commend the plan of the Board of Trustees for the formation of journals of ophthalmology and otolaryngology, but believe it should be carried out with the full cooperation of the members of the American Medical Association who are most interested in their success. The prevailing opinion appears definitely to favor the creation of separate journals. We would leave to the Board of Trustees the arrangement of the necessary details with the sections and specialties involved.

Regarding the resolution of Dr. Arthur T. McCormack of Kentucky which is as follows:

WHEREAS, The United States is at war with Germany, a war which involves the freedom and lives of our people, and the existence and honor of our nation; be it

Resolved, By the American Medical Association, the representative organization of the 145,000 physicians of America, that the president and the Congress and the supreme court of the United States, and the governors and legislatures and the supreme courts of the states and territories, respectively, be memorialized as follows:

1. The medical profession of America pledges itself to furnish adequate, competent officers for the efficient care and protection of the health and lives of our forces at home, on the seas or overseas; that it realizes, and will help to its utmost in solving, the necessity for the conservation of our food supplies; for the mobilization and protection of labor in home, factories and mines and on farms and our great transportation routes; and for such sacrifices to the common welfare in loans of money to or in increased burdens of taxation by the federal government as may be demanded for the proper exercise of its duties to civilization.

2. That all of these increased burdens demand for their success such conservation and care, above all other considerations, of our man power, as to make available for the efficient service of the nation whatever each man and woman can best be trained to do; and that such efficiency as the world has a right to expect of the United States cannot be realized until prompt and effective steps have been taken to educate our people in the control and prevention of those diseases which science has demonstrated to be preventable, with a view to the elimination of the waste from unnecessary illness, lingering inefficiency and premature death.

3. That those in authority, and having the right and opportunity of making, constraining and enforcing law, be urged to a realization to the paramount importance of the conservation of the human force of the individuals composing the nation, as distinguished from the material resources and mechanical devices which are of tremendous importance in this struggle only so long as adequately and effectively manned, by healthy and therefore productive men and women; with a view to the establishment of health departments clothed with the necessary authority, and provided with ample funds, to actually help all the people, whether crowded in the slums or on the avenues of the cities, or scattered on the high roads or by-paths of the country, to prevent

unnecessary disease and death; and realizing that in the present emergency that they be urged forthwith to construct and coordinate a national department of health from existing bureaus having health functions, making our United States Public Health Service, with its proud traditions and record of great achievement, the executive arm, with its Surgeon-General the head of the department, joining with it the bureaus of Vital Statistics and Chemistry and the Children's Bureau, with their present personnel and duties and creating such bureaus and activities as may effectively study and demonstrate the best methods in urban and rural sanitation, in home and public building ventilation, in housing, in public health nursing, in all of the multiple complex health problems of our nation, a proper solution of which will give it the power to settle right the great world problems as it knows best how to settle.

4. That, supporting the constitution, we understand that the police power, under which all health authority is constituted, is reserved to the states, and that such a national department of health would and should be but a strategic board, planning and demonstrating campaigns against existing or threatening diseases which produce suffering, inefficiency or death. It is urged that the states, respectively, provide for their health department such men and money as may be necessary for them to effectively reach and help all the people wherein endemic disease exists or epidemic disease threatens, and to establish and equip such county or district health department with an all-time executive, and such nursing and other aids as their varying needs may make necessary, all under civil service, their tenure of office being determined not in terms of years, but by economic administration and progressive decrease in disease and death rate, and increase in efficiency of the citizens of each jurisdiction.

5. That we proudly recall to the country that we shall send our best trained and most proficient physicians, surgeons and nurses to the most dangerous and deadly duty at the front. The first aid to the wounded boys that represent America there; and we confidently urge on the conscience of the American people not only a proper solution of these—the paramount problems of this struggle, but the adequate protection of our women and children of our country during and after our absence, from the maladministration of quacks and charlatans, faddists and sectarians, nostrum vendors and "patent medicine" fakirs, who have been loudest to acclaim their meticulous merits in times of peace and prosperity and will be found as conspicuous by their utter uselessness and worthlessness in the emergency of war.

Your committee would request that the House of Delegates take up Dr. McCormack's resolution specifically for action. As suggested in our previous report, the present status of this resolution is that of lying on the table. We desire to call it up for consideration. Under Chapter XIII, of the By-Laws, this action seems necessary to have the report become effective. It says:

No memorial, resolution or opinion of any character whatever shall be issued in the name of the American Medical Association unless it has been approved by the House of Delegates.

Your committee has further reconsidered the method of presenting this report to the proper government authorities, and desires to recommend that if adopted by the House of Delegates, it go through the regularly constituted officers of the House of Delegates to the government officials.

On separate motions, duly seconded and carried, the sections of the report were adopted.

Dr. Arthur T. McCormack, Kentucky, moved that the memorial presented at the first meeting of the House of Delegates be approved by the House of Delegates. Seconded.

After discussion by Drs. H. G. Wetherill, Arthur T. McCormack, Southgate Leigh and M. L. Graves, Dr. C. E. Cantrell, Texas, moved as a substitute motion that the memorial be referred, with power, to the special committee appointed to act in the matter presented by Dr. Frank Billings, Chicago.

Seconded and carried.

Dr. S. G. Kahn, Utah, moved to reconsider the action taken by the House at a previous meeting in assigning the number of units to the sections.

Seconded and carried.

Dr. S. G. Kahn, Utah, then moved that the Section on Diseases of Children be given the same number of units that it previously had. Seconded.

After discussion by Drs. C. H. Good, Stewart R. Roberts, George A. Moleen, L. R. DeBuys, Alexander Lambert, Abraham Jacobi, E. Eliot Harris and H. M. McClanahan, on motion of Dr. C. Eliot Harris, which was duly seconded and carried, the privileges of the floor were granted to Dr. Isaac A. Abt, Illinois, to speak on the subject.

After discussion by Dr. Abt and Dr. C. E. Cantrell, Dr. Arthur T. McCormack moved, as a substitute motion, that that section of the report of the Reference Committee on Reports of Officers now under consideration be amended so as to assign to each of the sections of the Scientific Assembly six units.

The substitute motion was seconded and carried unanimously.

The secretary presented the following resolution from the Section on Pharmacology and Therapeutics:

The Section on Pharmacology and Therapeutics instructs its delegate to the House of Delegates to present the following:

That this section favors the organization of pharmacists in the army on a basis analogous to that of dentists, insuring them a definite status in the army.

On motion of Dr. Arthur T. McCormack, Kentucky, which was duly seconded and carried, the resolution was referred to the special committee of which Dr. C. H. Mayo is chairman.

Seconded and carried.

The secretary read a communication from the Section on Stomatology in which the section advised the House of Delegates that the following resolution had been adopted by the section, defining the qualifications of applicants for Associate Fellowship in the Association which the section proposed to require before endorsing applicants, and asked the approval of the House of Delegates of this action of the section. The resolution is as follows:

Resolved, That applicants for Associate Fellowship holding the degree of D.D.S. or its equivalent, and members of their local, county or state dental organizations, before their application is approved by the section, must be considered by the executive committee of the section and must be endorsed by at least two members of this executive committe as having attained to a position in the dental profession either by virtue of original research work, or through some meritorious service rendered to the profession or public, which, in the judgment of the executive committee of the section, warrants favorable action on the applications.

The House of Delegates approved this action of the Section on Stomatology.

On motion, duly seconded and carried, the House of Delegates adjourned *sine die*.

THE REGISTRATION AT NEW YORK

The total registration at the New York Session was 5,047. Below are given two summaries, one by sections and one by states:

REGISTRATION BY SECTIONS

Practice of Medicine	1,258
Surgery, General and Abdominal	973
Obstetrics, Gynecology and Abdominal Surgery	365
Ophthalmology	401
Laryngology, Otology and Rhinology	352
Diseases of Children	166
Pharmacology and Therapeutics	36
Pathology and Physiology	83
Stomatology	47
Nervous and Mental Diseases	219
Dermatology	122
Preventive Medicine and Public Health	203
Genito-Urinary Diseases	133
Orthopedic Surgery	105
Proctology and Gastro-Enterology	136
Registrations without specifying any one section	348

REGISTRATION BY STATES

Alabama	14	Nevada	3
Arizona	1	New Hampshire	19
Arkansas	10	New Jersey	321
California	58	New Mexico	4
Colorado	37	New York	2,062
Connecticut	186	North Carolina	47
Delaware	10	North Dakota	7
District of Columbia	58	Ohio	202
Florida	11	Oklahoma	14
Georgia	36	Oregon	15
Idaho	2	Pennsylvania	552
Illinois	137	Rhode Island	50
Indiana	84	South Carolina	29
Iowa	47	South Dakota	10
Kansas	25	Tennessee	37
Kentucky	30	Texas	48
Louisiana	19	Utah	5
Maine	29	Vermont	25
Maryland	80	Virginia	51
Massachusetts	233	Washington	9
Michigan	93	West Virginia	36
Minnesota	71	Wisconsin	38
Mississippi	4	Wyoming	2
Missouri	60	Guest	199
Montana	7		
Nebraska	20		5,147

THE PATRIOTIC MEETING

A patriotic meeting was held at the Hippodrome, New York City, June 7, 1917.

The Hippodrome, which has a seating capacity of about 6,000, was filled to its utmost capacity.

Previous to the speech making, Sousa's band rendered a "Southern Rhapsody" and "Sheridan's Ride." Mademoiselle Frances Alda, costumed in flags typical of each country, sang, "Rule Britannia," "La Marseillaise," and the "Star-Spangled Banner," accompanied by Sousa's band and the Metropolitan Opera Chorus.

Dr. Alexander Lambert, president of the Medical Society of the State of New York, called the meeting to order at 8:45 p. m.

After stating that this meeting was held "to express our loyalty to our country and to show our patriotism," he introduced as the first speaker of the evening, Hon. John Purroy Mitchel, Mayor of New York City, who said:

Address by Hon. John Purroy Mitchel

Mr. President, Ladies and Gentlemen of the American Medical Association: It is a grateful privilege to be permitted to come here, representing the city of New York, and to say to the members of this great Association that New York extends a most cordial and hearty welcome. New York is glad to receive you within her hospitable gates and to assure you of her appreciation of your services rendered to mankind. This Association, the greatest of any representing the medical profession, numbering, I am told, over 80,000, comes here to hold its annual convention, and this meeting tonight is to consider means whereby this Association and the physicians and surgeons of the United States may serve our common country in this great crisis that now confronts us. (Applause.)

This Association has already rendered signal and distinguished services to the country and to the profession that it represents. This profession, the highest of the civil lay professions, has already through the ages given ample evidence of unlimited service to mankind of which it is capable, and now, when the United States finds that all the resources of our country, physical, financial and human, are demanded for service in this great world struggle, the physicians and surgeons of the United States have given the same response to that cause that they have always given at every time of a national crisis in this country. (Applause.)

One of the splendid and inspiring things which we see, as a result of this war, is the sacrificial spirit in which the men and women of the United States have responded to the nation's call. Germany said to the world that there was doubt as to America's real spirit in this matter; that there was doubt as to the patriotism of the people of the United States. My friends, I wish to say to you that the nation's call for funds with which to conduct this war is one answer to that challenge, and the other is the splendid response of the young manhood of America made two days ago in answer to the call for registration. (Applause.) There is no doubt about the patriotism of the people of the United States. All it asks is organization, direction, opportunity to serve, and the service will be there.

We are going into this great struggle for democracy, for the direction of popular self-government and the ideals for which America stands in the world. All the resources of our country will be devoted to it, and I know that if I had the authority I could speak with certainty that every member not only of this Association but of the profession which it represents in the United States is ever ready to render the service which may be required of you, and that service will be rendered to the fullest extent under whatever circumstances it may be asked. (Loud applause.)

Dr. Lambert then introduced Hon. Dudley Field Malone, who said, in part:

Address by Hon. Dudley Field Malone

New York is not only proud of the circumstances under which you are here, but proud of the fact that we have had a short respite before more harrowing times in which it might not be possible for you to get here.

You have been called together and summoned to a patriotic meeting to ask men to voice their sentiments and your sentiments with regard to the state of the nation and the duty of its citizenship. There is no man who does not feel his entire inadequacy to represent the collective scientific men and the American patriotism of the physicians and surgeons of the United States, and so I feel a little embarrassed. And yet there is a duty that stretches clear before every man and every woman in America, and the first duty is, it seems to me, that America shall not underestimate the power or the resources of the common enemy. At the beginning of the European war, Germany controlled a population of 70,000,000 people, and today she dominates 176,000,000 people of whom 82,000,000 are in abject slavery. Those are the circumstances and the pan-Germanic power which we together with our allies face as an enemy of world liberty and world democracy. And, my fellow citizens, it will not be sufficient that this vast army of 10,000,000 men, marshaled through our patriotism and a quick response of the young manhood of the nation, be mobilized and trained and made skilful for the contest and adequate to represent America and the allied cause, but there are other things to be done, not abroad, but at home in order to make certain the victory for ourselves against the common enemy. We cannot be of assistance to heroic England, to poverty-stricken France, to worried Italy, and to uncertain Russia unless we as a people put industry, energy and enthusiasm behind the cause of the government and the purposes of America in this war. While we have no quarrel with the German people, while we have a supreme contempt for German autocracy, if the aims of German autocracy are to be backed up by a united German people, then the whole resources of the United States will be devoted to fighting not only the the kaiser but the German people as well. (Applause.)

America can be of no aid to the allies and cannot win this war unless America can rely on the enthusiastic aid, the advice and untiring efforts of the American women. We cannot win this war by the amount of our arms, and it is almost axiomatic to say that a nation to succeed in a warfare like this must be both efficient and just. To be efficient she must mobilize her resources; she must centralize her resources by direct authority; she must marshal men of large business experience to control trade and commerce needed for the purposes of war. We must think clearly and think ahead, and we must profit by the untoward experiences of England and France. This is an emergency the like of which nations have not faced before. With our hopes, with our national and international aspirations and determinations, let us realize that the emblem of our country must not mean an empty symbol; that the stripes of red mean not the stripes of license and unrestricted speech and anarchy; that these stripes of red are stripes of blood—the blood of millions of men who have been willing to die for the institutions that we intend shall prevail in the world. (Applause.) These stripes of white are not the anemia of cowardice which quails before man's duty under these great circumstances; these stripes of white are the stripes of pure motive and parchment on which institutions and the character of the institutions of our nation are written, and the blue means the loyal firmament into which all our states have been swung as principalities in a common union, so that today we are a united people, holding up our heads, standing forth in battle array, taking up arms with industrial fervor to help England and France and Italy and Russia and other nations, not only that German autocracy shall be destroyed, but that the basis of permanent world peace may be secured. (Loud applause.)

Dr. George E. Vincent, president of the Rockefeller Foundation, was introduced and said, in part:

Address by Dr. George E. Vincent

Members of the American Medical Association: In your collective capacity, you take pride in what you have done for medical education and for the standards of your profession. As individuals you become satisfied with your successful careers. You feel a thrill of enthusiasm when you think of what your profession stands for. When you remember the great traditions of knowledge, skill and professional loyalty, you can point with pride to the members of your profession. You can point with pride to what members of your profession have done in foreign lands. They have rendered service which has won the admiration of mankind. You feel a glorious thrill of belonging to the medical profession. But now, you yourselves, in your individual capacity, and as an organization, are face to face with a real situation, and you

in the undercurrent of your thought, in the background of your minds, are asking yourselves the question, what can we do to show our loyalty to the profession and to the nation? Your skill, your investigation, your technic and cleverness are a great national asset, but the question which your fellow citizens are putting to you now is, what are you going to do in this great hour of the nation's need? And you have no doubt what that answer is going to be. You know what your loyalties are, and you are ready to show that the glories of your profession will find concrete expression in service in the field and in the hospital. Already members of your profession are in France; still others are on the sea, and there are hundreds of medical men here today who are ready to go when the call comes. The success of your service to the country will depend not on your skill or technic, but on the ideals of your country which you stedfastly hold in mind and become a real inspiration to your deeds. We are all facing a problem which so stirs the heart, and so firmly fixes the will, that as a united people we shall go steadily on to victory. (Applause.) After all, it is the soul of a people that counts; it is not the resources, it is not technic, it is not all the material things that make a nation. No. It is the soul of a nation; it is the thoughts of its citizens, the impulses which stir their hearts. (Applause.)

It is a precarious thing, a somewhat pathetic thing now to be a Russian, but I feel that Russia is not going to desert the allies, but is going to find unity, is going to find stability, is going to feel the support of our friendship, and as we rally to her support, Russia is going to find herself groping toward the light and ultimately, before this war is over, achieving a new unity and feeling that she is a new Russia which represents the dawn of democracy as one of the great nations of the world. (Applause.)

Let us remember heroic Belgium and recall the fact that patriotism is not a question of square miles, but is a question of quality of citizenship, loyalty to common ideals, and devotion to a common cause.

After referring to opportunity and the rendering of service, Dr. Vincent said:

Men and women of the medical profession, I congratulate you on what you have to offer to the nation, I congratulate you on the great opportunity you have to organize yourselves for the useful purposes of this great nation, and that you have resolved that your skill and your knowledge and your courage and your devotion shall be put at the service of your country, not with the thought of sacrifice, but in order that you in your own lives may fulfil this mighty purpose. Be strong in order that we may help the weak. Be just in order that we may defend the right. Be magnanimous. Be disinterested in order to rebuke aggression, and fight hard—fight the enemy with all our resources—fight until we win victory for peace and for the welfare and harmony and brotherhood of all mankind. (Loud applause.)

Address by Col. Theodore Roosevelt

When Col. Theodore Roosevelt was introduced the audience arose and gave him an enthusiastic ovation which lasted two or three minutes. When quiet was restored, Mr. Roosevelt said, in part:

I feel that the time has passed in this country for rhetoric or for conversation. (Laughter and applause.) The time has come when as a people we are to decide for ourselves whether hereafter we are to rank with the nations that do the things or with the nations that talk about those who do them. (Applause.)

Mr. Roosevelt then spoke at length on the question of service, of rights and privileges, saying that they go hand in hand with responsibility. In referring to the medical profession, he said:

Now friends, when I speak to you doctors of service, I speak to members of a profession which is honorably distinguished; I am tempted to say honorably distinguished above all other lay professions by the emphasis which they put on service over and above the reward for service. I do not mean for a moment that the doctor or anyone else should be indifferent to the reward. I do not like tom fools. I expect a doctor who is worthy of his salt, as I expect every man else from necessity, to have a reward given him for his service. He owes it to himself, his wife and his children. He owes it to the community. If he cannot pull his own weight, he cannot hope to pull anyone else's.

All I ask of the people of this country is that in the service of citizenship they shall apply the same rules that you men of the medical profession have applied as part of the ethics of your profession. In this crisis, I want you all to think not of the sacrifices you will have to make, but of the glorious opportunity that is yours to render service. If you are fit for citizenship, you will make sacrifices, whatever they may be. It is not so much you will deserve any extraordinary credit, but if you do not make sacrifices, if you do not render the service, then you are an abject creature who should be hunted out of the society of self-respecting men and women. I want to make the man who does not render service feel the force of that statement. What we need to hold ever before our eyes is not the incidental sacrifice but the high honor and privilege of being permitted to render the service. Every young man of the right type will eagerly long for a chance to render such service and will count himself thrice fortunate if he once secures a chance to render it, no matter what price in life or limb he may pay for it. (Applause.)

If we go home from this great meeting and let our patriotism evaporate in cheering, and waving of flags and listening to stirring tunes, and then say we hope the allies will win, we will have shown ourselves not to be the sons of the men who wore the blue or the gray in the Civil War, and unfit to claim spiritual heirship with the men of '76 who fought under Washington. (Applause.)

What I have said about service is especially applicable to the young doctors. Surgeons are sorely needed for our allies and for ourselves. We can hardly form any conception of the sufferings among the people of Belgium, Russia, Serbia, and Roumania. We have got to help our allies. Let us remember that England today has hardly more than one medical officer for every thousand men, and that in civil life there are in England towns of 15,000 and 20,000 people where there are only two or three elderly doctors left to take care of all of them. The United States needs for this war 40,000 medical practitioners and she has got about 5,000. We have got just about one eighth of the number we need. If we do not get those men, you will see our young recruits die like sheep in the camps where they concentrate, not through their fault, but because proper care has not been provided for them. Remember, these practitioners should be young men under 35, and they should be taken so as not to disrupt the medical schools and teaching hospitals. I want to say to you people here who are not doctors that your sons, your kinsfolk will be going to these camps and if you do not provide proper care for them they will die in these camps. And remember this: You cannot have them cared for if you do not give the surgeon-general power commensurate with responsibility. (Applause.) We are in war, and we have got to see to it that one man shall not through carelessness jeopardize the lives of his associates.

See what we did in building the Panama Canal. Panama had been a byword for lack of health. We could not have built that great canal if we had permitted unhygienic conditions to be perpetuated. We were able to build it because we took a trained medical man, gave him the power to take care of the health of the people on the isthmus, a power commensurate with his responsibility, and then sat back and saw him exercise that power well. That man is now surgeon-general of the army of the United States—Dr. William C. Gorgas. (Applause.) Give Gorgas and those associated with him the power commensurate with the responsibility of the tasks which they are to perform, make them absolute in their control over the health of the camps, and so far as necessary over the health conditions surrounding the camps, and then hold them to a rigid accountability for the exercise of that power and they will do things. (Applause.)

After referring to registration day and the large number of young men that registered, Mr. Roosevelt closed by saying:

We are in this giant war both for the sake of our national interest and for the sake of civilization and humanity throughout the world. For two years before we finally and reluctantly went to war, Germany had been engaged in a steady and reckless campaign of murder against American women and children and unarmed men. Germany had struck blows at international right and justice, and unless Germany is signally punished for what she has done, the whole movement for international fair dealing and brotherhood will have been put back for centuries. To the conquered countries she has behaved with a systematic and appalling brutality which is literally unparalleled among civilized nations since the close of the hideous religious wars of the seventeenth century.

I wish every American could read the book just published by Arthur Gleason, entitled, "Our Part in the Great War." One is appalled at the horror and the fearful cruelties he recounts, and no American who reads it can feel anything but shame if we do not instantly take effective action to rebuke those cruelties and defend ourselves. No American who reads it, if he has a spark of manhood and the American spirit in his soul, can fail to feel his heart hardened with the resolute purpose to fight for the right, and that it is his privilege to do his part in seeing that this nation goes steadfastly on in this war until its efforts and those of the allies are crowned with complete and overwhelming victory; and let every man within the hearing of my voice feel as much as every man throughout this nation feels, that his children ought to turn from him in shame unless he does his duty, unless he does all that within him lies, to bring victory which will make the American flag once more the flag of the brave and the free, the flag of civilization, of humanity, the flag of freedom, and of protest against wrong doing to all the nations of mankind. (Loud and prolonged applause.)

At the conclusion of the speech-making, Sousa's band rendered "The Invincible Eagle" and the soul stirring march "Hands Across the Sea."

THE SCIENTIFIC ASSEMBLY

THE OPENING GENERAL MEETING

Tuesday Evening, June 5

The opening meeting of the Association was held in the Grand Ball Room of the Hotel Waldorf-Astoria, and was called to order at 8:30 p. m. by the President, Dr. Rupert Blue, Washington, D. C.

Bishop Charles Sumner Burch delivered the invocation.

Address of Welcome

Dr. Wendell C. Phillips, chairman of the Committee on Arrangements, was introduced and said:

Mr. President, Ladies and Gentlemen, Guests, and the Profession of the Empire State: It falls on me, as chairman of the Committee on Arrangements, to have the honor of welcoming you to the metropolis of our country for your annual conclave.

It is now thirty-eight years since the American Medical Association met in the city of New York, and just before I came here I glanced over the President's address, delivered on that occasion by the late Lewis H. Sayre, who was the President of the American Medical Association at that time, and I learn that the entire membership of the Association thirty-eight years ago was about 6,150, and I believe the membership today is approximately 70,000, so that we now have at our annual conclave sometimes as many present as the entire membership at that time.

It is a great pleasure to have you come to New York at this time and enjoy some of the beautiful balmy weather of this famous summer resort. We all know how you have been suffering with cold and rains in other parts of the country, and we now welcome you to the sunshine of this metropolis. You have not had a chance to get warm since the first of last November. I need not tell you that our weather is exactly like what you have had in the last few days. People sometimes talk about the heat of New York. We do not know what it is here. The weather is always sunshiny in New York.

During the past few days you have had an opportunity to observe some of the medical and surgical activities of this city as you find arranged in the clinical sessions of the program, which has been gotten up for your benefit and pleasure, and the Committee on Arrangements certainly hopes that you will enjoy some of these privileges.

Before I go further, I must make an excuse for the absence of the mayor of our city. There is a slip on the part of the printer and some neglect on the part of the chairman of the Committee on Arrangements to have had the name of the mayor down for an address of welcome, because he wrote me that it would be impossible for him to be present on this occasion. Mayor Mitchell is a scrupulous man who always keeps his engagements, and he felt very much annoyed when his name was on the program. However, he expects to be with us on Thursday night and will deliver an address on that occasion, when our meeting, our patriotic meeting, will be held in the Hippodrome. We hope you will all arrange to be present on that occasion.

When the war came, it seemed to the Committee on Arrangements and the Entertainment Committee that it would be in better taste if we were to arrange for a patriotic meeting rather than the usual social entertainment in the form of a reception to the President, and through the kind offer of his friends and our friend, Dr. Alexander Lambert, Col. Theodore Roosevelt has consented to talk at the meeting on Thursday night. We shall also have Dr. George E. Vincent speak to us on that occasion and Madame Alda will sing in costume the national anthems of the three principal allies. We think it is going to be quite a night, and we hope you will all enjoy it. Tickets for admission to the Hippodrome may be obtained at the headquarters at the Hotel Astor.

I am not going to take too much time, but I have one more thing to say in connection with the medical profession of this great city. In other parts of the country, notably in Johns Hopkins and elsewhere, we have heard a great deal said about the "dead line." We have no dead line in the medical profession in New York. Men are as good at a hundred years as they are when they are younger as far as we can see, and we have two or three notable instances at this time. I have a letter in my pocket which was written by Dr. Thomas Addis Emmet, now in his ninetieth year, in which he says he regrets it is not possible for him to be present with us, but that he is with us in spirit tonight. (Applause.)

Some of you who graduated many years ago will remember one of the teachers in one of your colleges, a man now in his ninety-fifth year, still an active member of our State Board of Charities, and I believe he is beginning to write a very important volume of reminiscences. He is as hearty and active and as young in spirit as ever. I have no doubt that a great many of you thought he was dead a good many years ago. I have the very great pleasure in having you see that we have no dead line. [Here the speaker introduced Dr. Stephen Smith, now in his ninety-fifth year. The audience rose and gave Dr. Smith an enthusiastic ovation.] I think you will admit we are quite lively here in New York. We have another perennial member of the profession, one who has many more birthdays than any other man in America—Dr. Abraham Jacobi. (Applause.) [The audience rose and gave Dr. Jacobi an ovation similar to that given to Dr. Smith.]

Lastly, I bid you welcome to our city, welcome to our hospitals, welcome to our social festivities, and may you go away from New York thinking more of it than you did when you came. (Applause.)

President Blue then introduced Dr. Alexander Lambert, President of the Medical Society of the State of New York, who delivered the following address:

ADDRESS OF WELCOME BY THE PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

Mr. President, Members of the American Medical Association, Ladies and Gentlemen: It is with keen pleasure that the medical profession of New York welcomes the American Medical Association. It is more than a generation now since New York has had this pleasure and this honor. The generation of medical men that welcomed this society then have in a great part laid down their work and ceased from their labors, and with the exception of our few beloved friends here at our side, the activities of the work have devolved on what was to them the younger generation. The development of this country has grown in that time so that you of the western slope, you of the Northwest and Middle West look on us here as the effete East. A great nation has grown up and developed in this country since that time—a generation ago—and of that great nation New York has become the heart. From it the arteries run to its uttermost parts. From it the life-giving capital pours forth and is sent out in recurrent streams to build up and make possible the steady growth and wide development of the nation. Through it, in all these years, has been sent out new blood from many lands to help

develop and build up its vast territories, and back to it have come in returning veins the products from all the land that must be sent forth in the commerce with all the world.

It is peculiarly fitting that the American Medical Association should return to New York at intervals, because the American Medical Association was first conceived in the mind of a young and vigorous New York physician, Noah Davis, when in 1844, at the annual meeting of the Medical Society of the State of New York, in Albany, Dr. Davis, a delegate from the Broome County Medical Society, proposed a series of resolutions declaring in favor of the adoption of a fair standard of general education for students before commencing the study of medicine; of lengthening the annual courses of medical college instruction to at least six months, and the grading of the curriculum of studies; and have all examinations for license to practice medicine conducted by state boards, independent of the colleges.

As a result of the agitation then brought about, there assembled, May 1, 1846, in the hall of the medical department of New York University, about 100 delegates representing medical societies and institutions of sixteen of the twenty-six states of the Union. Again through the motion of Dr. Davis, committees were formed to report on the four following propositions at a convention to be held in Philadelphia in May, 1847:

First, that it is expedient for the medical profession of the United States to institute a national medical society;

Second, that it is desirable that a uniform and elevated standard of requirements for the degree of M.D. should be adopted by all the medical schools of the United States;

Third, that it is desirable that all young men before being received as students of medicine should have acquired a suitable preliminary education;

Fourth, that it is desirable that the medical profession of the United States should be governed by the same code of medical ethics.

When May, 1847, came around there assembled in Philadelphia representatives from twenty-eight medical schools and forty medical societies, being the organized medical institutions of twenty-two of the twenty-six states of the Union. After full discussion, the four propositions were adopted and a complete constitution, by-laws and code of ethics were also adopted. This, of course, was not done without opposition, and it must be confessed that the main opposition came, as one might expect, from New York and Boston, for these centers have always shown an individualistic rather than a collective tendency. In Baltimore, finally, in 1848, the first regular meeting of the American Medical Association took place, and it has since regularly met in annual convention with the exception of the early years of the great Civil War in this country.

The preface of the original constitution of the American Medical Association declared that the purposes of this Association were for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in the duties and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it.

It is interesting that after the Association has reached the three score years and ten of its existence it stands for the same purposes for which it was originally founded. It is today the controlling force and the active power toward the continual development and improvement in medical education. Through its Council on Medical Education it has raised and it has set the standards of medical education in this country. It has been true in its endeavor to improve its own profession, and has been true to the principles on which its existence was based.

It is another strange coincidence, as Dr. Phillips has already mentioned, that thirty-six years ago, in this city, the President of the American Medical Association at that time, Dr. Lewis Sayre of New York, proposed that the responsibility of disseminating medical knowledge throughout the country should not be confined to the transactions of this society but should be performed by means of a medical journal. Again a great idea affecting the American Medical Association sprang from the brain of a busy New York physician, and the best and most active medical journal of the world today has been the result. It needed the vigorous and growing West to develop that journal, and this was done through the youthful vigor and through the devotion of Dr. Simmons, and the profession today honors him for the work he has done and for the monument he has raised which, truly, is to him—and will be in the future—a monument more lasting than brass. Again can we confidently say that the American Medical Association has fulfilled and developed the best means of disseminating medical knowledge throughout the wide extent of this country.

Another object for which the American Medical Association was founded was to disseminate a code of ethics or a standard under which the members of its great profession could act in their intercourse with each other and with the world. That code, like all moral abstract ideas, has been the cause in this society and in the profession of many bitter differences of opinion. But it is gratifying to realize today that in the medical profession at least there is a frank willingness to acknowledge that however opinions of details may differ there is a full realization and acknowledgment that with the rights given to the profession by the state there go certain duties which must be lived up to, and the force of the public opinion within the profession is a stern monitor which insists that the duties and rights must go hand in hand and that the responsibility of these must be accepted.

It was in New York that the main division and bitter split on the code of ethics came, and it is with a keen pleasure that the profession of the state of New York and of the county of New York can welcome the American Medical Association with all the old quarrels forgotten and all the injuries therefrom healed, so that you are welcomed tonight by a united and harmonious profession.

Since the last meeting in New York, the growth of the Association has been such that the state of New York alone contains in its membership of the state society many more members than were contained in the national society at that time and, as a matter of fact, at the semicentennial celebration in 1897 it was proudly stated that the American Medical Association contained nearly 9,000 members. Today the Medical Society of the State of New York contains nearly that number, and the American Medical Association contains close on 80,000. This is but little realized either by the profession or by the public at large, and in welcoming you tonight it seems worth while to remind you how many things there are about the American Medical Association to which, when you are assembled in convention as you are tonight, you may point with pride, and how few things there really are regarding the American Medical Association that you have to view with alarm.

New York has shown you in the last two days its enormous practical advantages as a medical center, the great wealth of clinical material on which its medical schools found their knowledge and with which the medical students are instructed. We have endeavored to present to you the foundation on which the scientific knowledge of medicine is built—that is, the clinical study at the bedside of the various manifestations of the morbid processes that we know as disease—and to show also the many modern ways of dealing with the various medical and surgical situations that may arise. We have also endeavored to bring together for your information and study all the allied subjects which touch the medical profession. We have endeavored to show you the practical application of nursing throughout this city. We have endeavored to show you the working of the enormous health department and the mechanism by which the health of the city is protected and through which the sanitation of the city is performed; to show you also how all this can be used for educational value to instruct and teach the public how it is protected and how, through that knowledge, they may protect themselves. We have further endeavored to bring to your notice, and for your information and instruction, how the many problems of the building and maintenance of hospitals may best be solved. We have gone further, and we have shown a new development hardly yet a decade old—we have endeavored to show you the means by which the human side of the hospital must in the future develop and how hospitals must and, in fact, are at present broadening their influence and their care over the patients that come to their wards. Hospital social service has humanized the hospitals of this city as nothing else has done, and has humanized the hospitals in this country in the many cities in which it has been undertaken and so well developed; for this idea, starting in Boston, has spread throughout the country. Hospital social service has developed that side of medicine which deals with the environment of the patient in its relation to sickness and injury, and it deals with the strain of that environment in the life of the patient. Through its influence and through the ideas developed therefrom we have come to realize that while the hospital is a place for the care of the sick and the

injured, it is also a place from which physicians are ready to gaze humanely out on humankind. It has enormously broadened the outlook of medicine; it has developed enormously the possibilities of surgery, for it has broadened the outlook of medicine by extending the influence of hospital care out through the complete convalescence and also greatly prevented the recurrence of disease in its patients through the regulation of their lives and environment. It has extended the usefulness of surgery in that it has given the opportunity of follow-up work to show the surgeon the results he has been able to obtain in restoring his injured patient to usefulness and economic value and efficiency.

We have, in this session in New York, brought together for the first time, for your study and consideration, all the associated interests that are indispensable to the development of medicine in its relation to the patients and to the hospitals through which so much work of the medical profession must be done.

New York welcomes you to her hospitality. She welcomes you to all she has to give for the pleasure and entertainment of mankind, and her reputation on that score is not small. We realize that such opportunities here are so widespread and so many that in playing the host to you we know you prefer to be left alone to your own devices in this regard, and we have thought the broadest hospitality was to accede to your wishes in this matter.

We appreciate that as we welcome you we are standing under a shadow so broad and so deep that it is not fully realized by the majority of the people. We cannot clearly foresee the future. We cannot foretell what demands this war may bring on this Association. A goodly number of its members have already gone to give their aid as best they can to those who need it. Many, many more must follow and will follow. In this war the medical corps has suffered proportionately the greatest losses; but where danger lies there lie honor and distinction also. What will be the results of this war on the meetings of this Association we must let the future decide. In the present we heartily welcome you to this meeting of the American Medical Association in New York, and we offer you New York's heartiest welcome and her hospitality in fullest abundance.

Dr. Walter P. James, President of the New York Academy of Medicine, was introduced and said:

ADDRESS OF WELCOME BY THE PRESIDENT OF THE NEW YORK ACADEMY OF MEDICINE

Mr. President, Ladies and Gentlemen: Dr. Lambert has just given you a warm welcome on the part of the medical profession of New York State, and I am expected to say a word of welcome for the medical profession of this city on behalf of the New York Academy of Medicine. After all, New York City is just one part of the state. After the welcome by Dr. Lambert, I cannot help thinking of the farmer who cut a large hole in his barn door for the dog and a small one for the cat (laughter), but this gathering tonight is worthy of a very hearty welcome, for the American Medical Association, above and beyond most gatherings that I know of represents team play on the part of a great profession. President Wilson has said that this war would be won only by team play, and we are convinced of the truth of his remark. Team play is what distinguishes man from the lower animals. Team play carried to a higher point is what distinguishes the higher groups of mankind from the lower, and, after all, that makes us civilized when we come to the final analysis. What makes us able to conquer is our forces arranged as team play. The value and importance of team play have been discovered by our profession. I know of no other profession that has been able to get together gatherings of this sort with one idea, each working with the other in the most perfect kind of team play.

I was impressed with this feature of our own profession one night during the past winter when, at a meeting of the New York Academy of Medicine, I happened to see in the audience a man who did not belong there, although I was glad to see him. He was a lawyer who is president of one of the largest and most important trust companies in this city. After the meeting I spoke to him and he said to me, "This must be a very unusual gathering, is it not?" "Not at all," I said; "It is a gathering of doctors such as is seen in other large cities all over the country. In the large cities there are larger gatherings, and in the smaller cities there are smaller gatherings, doing the same thing." "Well," said the lawyer, "all I can say is that I congratulate the medical profession, for I know of no other profession that could hold such a meeting as I have seen tonight." "What do you mean?" I said. He replied, "I have reference to the kindliness, the helpfulness, the absolutely unalloyed interest on the part of each member of your profession in every other man's work." Ladies and gentlemen, I thought that was a great compliment to our profession.

The relations existing between the medical profession and the public are becoming closer and more intimate every day. For instance, in the task that has to do with preventive medicine we are beginning to find out that we can accomplish very little unless we have the people with us. In other words, we must have team play between the profession and the public.

This morning, at a meeting of the House of Delegates, a strong resolution was passed advocating the transfer of the quarantine station of New York City to the national government under the United States Public Health Service. There is a measure I fancy that is reasonable to every person here. I have never heard medical men in this neighborhood who have had a word to say against it. Through the efforts of the medical profession of New York City and the Medical Society of the State of New York, we have secured from our legislature at Albany a bill authorizing the transfer of the quarantine station to the United States Public Health Service, with the necessary steps having been authorized by Congress. When we consider that the Public Health Service in Washington maintains an elaborate health service throughout the entire world, and officers of that service are scattered through Europe and Asia for the express purpose of ascertaining all the facts that can be ascertained about communicable diseases in these countries, with a view of preventing the conveyance of dangerous communicable diseases to our people, you can readily appreciate the importance of the public health work of this country. And how can any one help saying it is impossible to have team play in quarantine work, team play in preventive medicine in the United States today, without having all the quarantine stations in the hands of one governing body? As the situation is today, Baltimore is waiting to come in as soon as New York does.

I remember talking with one of our legislators a short time ago when I made this remark: "I do not suppose, after all, what the doctors say to a legislator carries any weight." The legislator replied, "Don't you believe it; I know of no body of men in the country which legislators are as much afraid of as they are of doctors." I said to him, "How do you account for that?" "Well," he replied, "in the first place, doctors go through the community and visit every house. In the second place, they have the confidence of the people. In the third place, and, as a rule, they are invariably men who know what they are about, and they have no ax to grind."

I should like to see the members of this association go through the country imbued with the idea that the quarantine stations of the United States should be under the United States government and placed in the hands of the Public Health Service.

Gentlemen, with these few words of enthusiastic commendation of the ability of the medical profession to play good, straight-forward, honest and effective team work, I, too, on the part of the medical profession of New York City bid you a most affectionate, hearty and enthusiastic welcome to the town. (Applause.)

Dr. Rupert Blue, in introducing and installing the President, Dr. Charles H. Mayo of Rochester, Minn., said:

To introduce one who needs no introduction to any scientific assembly of the world; to present to you a man whose name is and always will be held in affectionate memory by thousands whom his skilful hands have given surcease from pain, and above all to relinquish the high honor of the presidency of the American Medical Association to one so highly respected and so much beloved by us all, is indeed a great honor. When one seeks a member of our profession who combines personal virtue and high ideals with scientific acumen and tactful technic with the fearlessness of a soldier and the tenderness of a woman, one turns instantly to one who has given of himself and of his substance to the end that humanity may live in peace and the science of medicine may advance. He who combines all these qualities is our President, Dr. Charles Mayo. (Loud applause.)

President Mayo then delivered his address, on "War's Influence on Medicine," which was published in THE JOURNAL, June 9, 1917, p. 1673.

Adjourned.

MINUTES OF THE SECTIONS

SECTION ON SURGERY, GENERAL AND ABDOMINAL

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order at 9:40 by the chairman, Dr. William D. Haggard, Nashville, Tenn.

Dr. William D. Haggard, the chairman, stated that Dr. Eugene H. Pool, New York, secretary, had been called to the colors and asked that a motion be made to have Dr. J. A. Vietor, New York, act in his place for the 1917 meeting, which was done.

Dr. William D. Haggard, Nashville, Tenn., read the chairman's address, entitled "Surgery of the Spleen." No discussion.

Dr. Arthur Dean Bevan, Chicago, read a paper on "The Problem of Unnecessary Operations and of Incompetent Surgeons." Discussed by Drs. James E. Moore, Minneapolis, and Arthur Dean Bevan, Chicago.

Dr. John B. Deaver, Philadelphia, moved that a committee of ten be appointed by the chairman to further Dr. Bevan's ideas relative to this vital question.

The motion was seconded.

Dr. William M. Robertson, Warren, Pa., offered an amendment to have the committee report to the Judicial Council, for such action as may be deemed proper, with instructions to the delegate from this section to report this action to the House of Delegates.

This amendment was accepted by Dr. Deaver, and the motion as amended put and carried. (House of Delegates not advised of this motion).

The chairman announced he would appoint the committee at a later session.

Dr. Donald C. Balfour, Rochester, Minn., read a paper on "The Surgical Significance of Gastric Hemorrhage." Discussed by Drs. Fred B. Lund, Boston, and Donald C. Balfour, Rochester, Minn.

Dr. Lewis L. McArthur, Chicago, sent a telegram regretting that he was unable to be present. He specially regretted this as his name appeared on the program for an article on "Modification in the Technic of Gastric Surgery."

Dr. Willard Bartlett, St. Louis, read a paper on "A New Operation for Floating Kidney." Discussed by Drs. Hubert A. Royster, Raleigh, N. C.; Daniel N. Eisendrath, Chicago; Philip Marvel, Atlantic City, N. J.; C. E. Cantrell, Greenville, Texas; Martin B. Tinker, Ithaca, N. Y., and Willard Bartlett, St. Louis.

Dr. Robert C. Coffey, Portland, Ore., read a paper on "Intravisceral and Intra-Abdominal Pressure." Discussed by Drs. Edward Martin, Philadelphia, and Robert C. Coffey, Portland, Ore.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. Allen B. Kanavel, Chicago, read a paper on "Clinical and Experimental Data in Relation to Fat Transplantation." Discussed by Drs. Alexius McGlannan, Baltimore, and Allen B. Kanavel, Chicago.

The chairman said that since Dr. Bertram M. Bernheim, Baltimore, would be obliged to leave for active war duty, Thursday, when he was on the program for a paper, he would entertain a motion that Dr. Bernheim read his paper now. The motion was made, seconded and carried.

Dr. Bertram M. Bernheim, Baltimore, read a paper on "Sodium Citrate Blood Transfusion: A Comparison." Discussed by Drs. George I. Miller, Brooklyn; Richard Lewisohn, New York; Arthur H. Bogart, Brooklyn; J. Shelton Horsley, Richmond, Va., and Bertram M. Bernheim, Baltimore.

Dr. William O'N. Sherman, Pittsburgh, read a paper on "The Abortive Treatment of Infection." Discussed by Drs. Charles L. Gibson, New York; George W. Hawley, Bridgeport, Conn.; J. W. Long, Greensboro, N. C.; R. W. Corwin, Pueblo, Colo.; E. S. Van Duyn, Syracuse, N. Y., and William O'N. Sherman, Pittsburgh.

Dr. Parker Syms, New York, read a paper on "The Evolution of Cancer of the Breast." Discussed by Drs. Daniel N. Eisendrath, Chicago, and Parker Syms, New York.

Dr. E. Wyllys Andrews, Chicago, read a paper on "Absorbable Metal Clips for Buried Sutures and Ligatures, and Special Alloy for Rapid Absorption." No discussion.

Dr. Harry M. Sherman, San Francisco, read a paper on "The Closure of Cleft Palate: A Technic and the Reasons for It." Discussed by Drs. Vilray P. Blair, St. Louis; Truman W. Brophy, Chicago; W. B. Swift, Boston, and Harry M. Sherman, San Francisco.

THURSDAY, JUNE 7—MORNING

Dr. Willy Meyer, New York, read a paper on "The Rectangular Flap Incision for Operations Within the Upper Abdomen." Discussed by Drs. Robert E. Farr, Minneapolis; Fred B. Lund, Boston, and Willy Meyer, New York.

Dr. Fred B. Lund, Boston, read a paper on "Tumor of the Intercarotid Body." Discussed by Drs. Stanley Stillman, San Francisco, and Fred B. Lund, Boston.

Dr. William Linder, Brooklyn, read a paper on "The Diagnosis of Acute Pancreatitis, with Report of Thirty-Three Cases." Discussed by Drs. John B. Deaver, Philadelphia; Ernest Laplace, Philadelphia, and William Linder, Brooklyn.

Dr. Hugh McKenna, Chicago, read a paper on "Surgery of Bones and Joints, with Especial Reference to the Open Operative Treatment of Fractures, and a Method of Arthroplasty in Ankylosis of the Elbow Joint." Discussed by Drs. Philip H. Kreuscher, Chicago; R. H. Gibbons, New York, and Hugh McKenna, Chicago.

Dr. J. Rilus Eastman, Indianapolis, read a paper on "Gunshot Fractures." Preceding the discussion of this paper, Dr. George W. Hawley, Bridgeport, Conn., showed moving pictures of a new fracture frame combining traction and suspension with fluoroscopic control, especially in military fractures, devised by himself.

Dr. Eastman's paper was then discussed by Drs. Leonard Freeman, Denver; Bernard H. Oberembt, Milwaukee, Wis., and Frank P. Corrigan, Cleveland.

THURSDAY, JUNE 7—AFTERNOON

The following officers were elected: Chairman, Dr. E. Starr Judd, Rochester, Minn.; vice chairman, Dr. Robert C. Coffey, Portland, Ore.; secretary, Dr. Eugene H. Pool, New York; assistant secretary, Dr. George P. Miller, Philadelphia; delegate, Dr. Floyd W. McRae, Atlanta, Ga.; alternate, Dr. Nelson M. Percy, Chicago.

The chairman said: Dr. Pool, our secretary, has been called to Fort Benjamin Harrison, and therefore has been unable to be with us and to serve, but I am sure the section is indebted to his substitute, Dr. John A. Vietor, who has acted so satisfactorily in his absence.

Dr. Charles H. Frazier, Philadelphia, read a paper on "Choice of Method in Operations on the Pituitary Body." Discussed by Drs. Charles E. Elsberg, New York; F. S. Marshall, Muskegon, Mich., and Charles H. Frazier, Philadelphia.

The following papers were read as a symposium on "Exophthalmic Goiter":

Dr. E. C. Kendall, Rochester, Minn.: "Studies in Experimental Hyperthyroidism."

Dr. George W. Crile, Cleveland, sent a paper on "Exophthalmic Goiter," which, on motion by the section, was read by Dr. William D. Haggard, Nashville, Tenn.

Dr. Charles N. Dowd, New York: "Constitutional Disturbances Which Come with Chronic Goiter."

These three papers were discussed by Drs. A. J. Ochsner, Chicago; Martin B. Tinker, Ithaca, N. Y.; Solomon Solis Cohen, Philadelphia; John Rogers, New York; E. C. Kendall, Rochester, Minn., and Charles N. Dowd, New York.

The acting secretary, Dr. John A. Vietor, read the following list of names as the members appointed by the chairman to study the problem of unnecessary operations and of incompetent surgeons: Drs. A. D. Bevan, Chicago; William J. Mayo, Rochester, Minn.; George W. Crile, Cleveland; John B. Deaver, Philadelphia; George E. Brewer, New York; Emmet Rixford, San Francisco; Fred B. Lund, Boston; Kenneth A. J. McKenzie, Portland, Ore.; J. M. T. Finney, Baltimore, and William D. Haggard, Nashville.

Dr. Ernest A. Codman, Boston, read a paper on "Advantages of the End-Result System to Surgical Science." Discussed by Drs. John D. Bonnar, Buffalo; Harry M. Sherman, San Francisco, and E. M. Stanton, Schenectady, N. Y.

Dr. Samuel Robinson, Rochester, Minn., read a paper on "The Resection of Lobes of the Lung." Discussed by Drs. Howard Lilienthal, New York; Willy Meyer, New York, and Samuel Robinson, Rochester, Minn.

FRIDAY, JUNE 8—MORNING

A joint session was held with the Section on Pathology and Physiology.

The following papers were read and discussed separately as a symposium on "Anesthesia":

Dr. Willis D. Gatch, Indianapolis: "Anesthesia in the Curriculum and Clinic." Discussed by Drs. Arthur Dean Bevan, Chicago; E. D. Lee, New York; S. J. Meltzer, New York; A. F. Erdman, Brooklyn; Torald Sollmann, Cleveland; Kenneth A. J. McKenzie, Portland, Ore.; F. W. Pinneo, Newark, N. J., and Willis D. Gatch, Indianapolis.

Dr. Conrad Georg, Jr., Ann Arbor, Mich.: "Pathologic Pulmonary Changes from Endotracheal Insufflation Anesthesia in Experimental Lung Surgery." Discussed by Drs. Willy Meyer, New York; Charles H. Peck, New York; S. J. Meltzer, New York; Charles A. Elsberg, New York; Samuel Robinson, Rochester, Minn.; Franz J. A. Torek, New York, and Conrad Georg, Jr., Ann Arbor, Mich.

The chairman introduced Dr. Charles H. Mayo, who spoke as follows:

It is like getting home again to get back to the surgical section. Other duties have kept me away for the first time from much of the work, but I want to commend the work of this section. I have been going over it. There were only three men who did not appear to read their papers; one, Dr. Crile, sent his from London to be read and it was read, and Dr. L. L. McArthur wired that it was impossible for him to come, but that it was the first time in thirty-seven years that he had failed to appear when his name had been on the printed program, showing that it was unavoidable. I want to commend the management of this section, which is an easy one to manage, by our worthy chairman. And just a moment to say that the reason all the sections are easy to manage this year is to be found in the wonderful organization and efficiency of the committees of the state in preparing everything possible for the section work. We all feel a deep obligation to that committee, and I am sure we shall all return home with renewed enthusiasm from attending the greatest meeting ever held by the greatest medical association in the world.

Dr. Frank C. Mann, Rochester, Minn.: "Shock During General Anesthesia." Discussed by Drs. Fenton B. Turck, New York; S. J. Metzler, New York, and Frank C. Mann, Rochester, Minn.

The chairman introduced the vice chairman, Dr. Robert C. Coffey, Portland, Ore., and relinquished the chair to him.

Dr. Evarts A. Graham, Mason City, Iowa: "Toxic Factors of Some of the Common Anesthetic Substances." Discussed by Dr. C. Henry Davis, Chicago.

Dr. A. J. Ochsner made a motion, which was seconded and carried, that the section pass a vote of appreciation of the work of the officers of the section which resulted in this magnificent and interesting program.

The paper by Dr. George E. Fell, Chicago, on "Artificial Respiration," was read by Dr. A. J. Ochsner, Chicago. Dr. Fell was too ill to attend the meeting.

SECTION ON OPHTHALMOLOGY

WEDNESDAY, JUNE 6—MORNING

The section was called to order at 9 o'clock by the chairman, Dr. William Zentmayer, Philadelphia.

The chairman announced that Dr. Edgar S. Thomson, New York, would act as secretary of the section in the absence of Dr. George S. Derby, who is abroad.

Dr. William Zentmayer, Philadelphia, read the chairman's address, the subject of the scientific portion of which was "The Eye and the Endocrine Organs." No discussion.

On motion the chairman's address was referred for action to the executive committee.

The secretary announced that Major Theodore C. Lyster of the United States Army would deliver an address in the meeting room at 9 p. m. on the visual tests required in the aviation service of the army.

Dr. Samuel Theobald, Baltimore, read a paper on "Some Observations Which Seem to Lend Support to a Long Discarded Theory of the Chief Function of the Oblique Muscles of the Eye." Discussed by Drs. Lucien Howe, Buffalo; Edward Jackson, Denver; Francis Valk, New York; Alexander Duane, New York; W. H. Bates, New York; Walter B. Lancaster, Boston; Will P. Walter, Evanston, Ill.; F. Park Lewis, Buffalo, and Samuel Theobald, Baltimore.

Dr. Edmond E. Blaauw, Buffalo, read a paper on "Binocular Single Vision: Leaving Out the Consideration of the Color Perception and the Problems of Strabismus." A stereoscopic test apparatus was exhibited. Discussed by Drs. Walter B. Lancaster, Boston; F. H. Verhoeff, Boston; George T. Stevens, New York; Francis Valk, New York; Linn Emerson, Orange, N. J.; Elmer G. Starr, Buffalo; Lucien Howe, Buffalo, and Edmond E. Blaauw, Buffalo.

Dr. Frederick H. Verhoeff, Boston, read a paper on "The Treatment of Hypopyon Keratitis."

Dr. William E. Shahan, St. Louis, read a paper on "Further Study of the Effects of Heat on the Eye" (with exhibition of instrument for application of heat to the eye).

These two papers were discussed by Drs. William C. Posey, Philadelphia; Edgar S. Thomson, New York; Peter N. K. Schwenk, Pihladelphia; John E. Weeks, New York; Elmer G. Starr, Buffalo; J. A. Donovan, Butte, Mont.; Melville Black, Denver; R. L. Randolph, Baltimore; S. Lewis Ziegler, Philadelphia; F. Park Lewis, Buffalo; L. Webster Fox, Philadelphia; William Zentmayer, Phialdelphia; Frederick H. Verhoeff, Boston, and William E. Shahan, St. Louis.

Dr. F. Park Lewis, Buffalo, read a paper on "Crystalline Deposits in the Eye." Discussed by Drs. Burton Chance, Philadelphia, and Melville Black, Denver.

WEDNESDAY, JUNE 6—AFTERNOON

The section was called to order at 2 o'clock by the chairman, Dr. William Zentmayer, Philadelphia.

On motion the section went into executive session.

Dr. Lucien Howe, Buffalo, chairman, presented the report of the Committee on Collective Investigation Concerning the Ocular Muscles. Dr. W. L. Pyle, Philadelphia, moved that the report of the committee be adopted. Seconded by Dr. C. D. Wescott, Chicago. Carried.

The scientific session was resumed and the following instruments and appliances were exhibited:

Dr. Norman W. Price, Niagara Falls, N. Y., exhibited a new phorometer which may be used comfortably by the patient at the bedside, and which measures accurately. The instrument consists of a dial graduated from 0 to 90 degrees, with a long arm and a mirror at the end in which the patient watches his own eye. The patient sits with his back to the light and the oculist turns the dial in front of the patient's eye. When it is directly in front the dial registers 0, and as it is turned down it will register anywhere up to 90 degrees. The dial turns on itself at all angles so that the angle can be obtained at any point. It can be used rapidly, taking only one quarter of the time of the ordinary phorometer.

Dr. Walter L. Pyle, Philadelphia, exhibited a model of a new trial frame for test lenses, the advantage of which is the ability to place it in firm position on the sides of the nose and the adjacent cheeks approximately in the position that the prospective spectacles or eye glasses will be worn. The frame can be lowered or raised by a screw; the two sides of the frame can be moved independently, of advantage in the numerous cases in which the eyes are unequally distant from the nose. A special construction permits the turning of the screw for lateral motion, over the eye opposite to the one being tested, thus avoiding obstruction by the examiner's hand. The frame is rigid without being heavy.

Dr. Henry H. Briggs, Asheville, N. C., exhibited a hook and link with which he demonstrated his method of shortening an ocular muscle, described in his paper in the program on "Tendon Shortening."

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Dr. E. R. Crossley, Chicago, exhibited a model of his apparatus for immobilization of the head and eyelids during operations on the eyeball.

Dr. Edmond E. Blaauw, Buffalo, exhibited with his paper at the morning session an apparatus for determining stereoscopic vision.

Dr. Francis Valk, New York, exhibited, in the discussion on Dr. Blaauw's paper, apparatus for determining stereoscopic vision.

Dr. Alan C. Woods, Philadelphia, read a paper on "The Anaphylactic Basis of Sympathetic Ophthalmia: An Experimental Study." Discussed by Drs. George E. de Schweinitz, Philadelphia; J. W. Jervey, Greenville, S. C.; F. H. Verhoeff, Boston; Stewart B. Muncaster, Washington, D. C.; Mark J. Schoenberg, New York, and Alan C. Woods, Philadelphia.

Dr. Arthur J. Bedell, Albany, N. Y., read a paper on "Oxycephalia: Report of Three Cases, with Operation in One." No Discussion.

Dr. William B. Chamberlin, Cleveland, read a paper on "The Endonasal Operation on the Lacrimal Sac." Discussed by Drs. Harris P. Mosher, Boston, and Dr. William B. Chamberlin, Cleveland.

Dr. Frank C. Todd, Minneapolis, chairman of the executive committee, presented a resolution for the action of the section that had the approval of the executive committee, requesting the House of Delegates to permit the section to begin its sessions on Tuesday afternoon of the meeting instead of Wednesday morning, as at the present session.

On motion of Dr. G. E. de Schweinitz, Philadelphia, duly seconded, the action of the executive committee was approved, and the committee was instructed to present the matter to the House of Delegates. (Not transmitted to the House of Delegates).

Dr. Clifford B. Walker, Boston, read a paper on "Neurologic Perimetry and a Method of Imitating Daylight with Electrical Illumination." Discussed by Dr. Luther C. Peter, Philadelphia.

Dr. Walter R. Parker, Detroit, gave a "Demonstration of Pathologic Changes in the Optic Nerve in Cases of Artificially Induced Intracranial Pressure." No discussion.

THURSDAY, JUNE 7—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. William Zentmayer, Philadelphia.

The executive committee reported that it desired to endorse the suggestion of the chairman of the section concerning the appointment of a committee on social service as related to ophthalmology, and recommended that the present chairman appoint that committee.

The committee also recommended the appointment of Dr. Peter A. Callan, New York, as memorialist for Dr. W. B. Marple, New York, deceased, and Dr. Luther C. Peter, Philadelphia, as memorialist for Dr. Wendell Reber, Philadelphia, deceased.

On account of the absence of the secretary, Dr. George S. Derby, Boston, in Europe in military hospital medical service, the committee reported that Dr. Edgar S. Thomson, New York, had consented to act as secretary of the section during Dr. Derby's absence.

The term of Dr. Hiram Woods, Baltimore, as a member of the Board on Ophthalmic Examinations, had expired. It seemed desirable, in this initial period, that he be continued for another period of three years.

On motion, duly seconded, the report of the executive committee was adopted.

The following officers were elected: chairman, Dr. Alexander Duane, New York; vice chairman, Dr. F. Phinizy Calhoun, Atlanta, Ga.; acting secretary, Dr. Edgar S. Thomson, New York; delegate, Dr. Thomas B. Holloway, Philadelphia; alternate, Dr. McLeish.

Dr. Edward Jackson, Denver, chairman, read the report of the Committee on Standardizing Test Cards.

On motion, duly seconded, the report was adopted and the committee continued. The report will be found in the printed transactions of the section.

Dr. Edward Jackson, Denver, read the annual report of the American Board for Ophthalmic Examinations.

Dr. S. D. Risley moved the adoption of the report with its recommendations. Seconded and carried.

Dr. Walter R. Parker, Detroit, made a verbal report of the Committee on the Elliot Trephine Operation, which will be found in the transactions of the section, in which a request was made for funds for continuing the work of the committee.

Dr. S. D. Risley, Philadelphia, moved the continuance of the committee and the furnishing of funds. Dr. A. E. Bulson, Jr., Fort Wayne, Ind., suggested that the plea for funds be referred to the Knapp Testimonial Committee, as the section had no funds. He made this as an amendment to Dr. Risley's motion, and the amendment was accepted by Dr. Risley. The motion as amended then carried.

Dr. A. E. Bulson, Jr., Fort Wayne, Ind., read the Report of the Committee on the Knapp Testimonial Fund.

Dr. John E. Weeks, New York, moved that the report be accepted and filed. There were no objections and it was so ordered.

Dr. John E. Weeks, New York, read the report of the Committee on Award of the Knapp Medal, which will be found in the transactions. The committee awarded the medal to Dr. Walter R. Parker, Detroit, in recognition of the work described in 1916 in his paper on "The Relation of Choked Disk to the Tension of the Eyeball, an Experimental Study."

Dr. A. E. Bulson, Jr., moved that the report be accepted. It was seconded by Dr. S. D. Risley and the motion was carried.

Dr. A. E. Bulson, Jr., by direction of the chairman, presented the medal to Dr. Parker, who expressed his appreciation.

Dr. Frank Allport, Chicago, chairman of the Committee on Conservation of Vision, was not present, but sent a letter. This with a report made by Dr. Hiram Woods, Baltimore, will be found in the transactions; also a letter from Edward N. Van Cleave, managing director of the executive staff of the National Committee for the Prevention of Blindness, suggesting the continuance of the committee and the appointment of a New York member of the section to act as local chairman for Dr. Allport, and that it act with the national committee under the name of "The Committee on Conservation of Vision, American Medical Association, Cooperating with the National Committee for the Prevention of Blindness." The name of Dr. Walter B. Weidler of New York was suggested as the local acting chairman. Dr. Woods recommended that the suggestion of Mr. Van Cleave be accepted.

Dr. A. E. Bulson, Jr., moved that the section approve the plan as proposed and that the committee, as far as the section is concerned, continue the work as outlined. Seconded by Dr. S. D. Risley, and carried.

Nominations were made for members of the Committee on Award of the Knapp Medal. The following were selected: Drs. Walter R. Parker, Detroit; William H. Wilder, Chicago, and Arnold Knapp, New York.

Dr. Hiram Woods, Baltimore, presented a resolution which, after discussion and amendment, was adopted in the following form:

WHEREAS, It is officially stated that in the present crisis of our country the government will need the services of every available medical man; and

WHEREAS, The present number of ophthalmologists in the regular medical department and Officers Reserve Corps is too small to meet requirements; and further,

WHEREAS, The present classification of ophthalmologists as surgeons has a tendency to prevent volunteering because it is apt to assign to men of special training work for which they are unfitted, and to remove them from work of great importance which they can do, therefore be it

Resolved, By the Section on Ophthalmology of the American Medical Association, in session in New York, June, 1917, that the section respectfully makes the following recommendations:

1. That ophthalmologists be classed as a separate division of the medical department.

2. That a survey be made of the ophthalmologists of the United States for duty in various lines of work (examination of visual qualifi-

cations of recruits, aviation corps, signal corps, detection of malingerers, hospitals, etc.).

3. That the proper persons to make this survey are the members of the subcommittee on ophthalmology of the General Medical Board of the Council of National Defense.

4. That the section respectfully petitions the surgeons-general of United States military forces to appoint this subcommittee on ophthalmology to make a review of the ophthalmic profession of the country and submit to the departments lists of those best qualified to fulfil the various duties falling on ophthalmologists.

5. That the surgeons-general be further petitioned to follow the recommendations of this board in the assignment of work as closely as is consistent with the good of the service, requesting those selected by the board, but not members of the Officers Reserve Corps, to volunteer for such service as the board may designate. [Not transmitted to the House of Delegates.]

Dr. Edward Jackson, Denver, read a paper on "Conical Cornea, or Anterior Myopia."

Dr. Meyer Wiener, St. Louis, read a paper on "A New Operative Method for the Relief of Advanced Cases of Keratoconus, with Report of Two Cases."

These two papers were discussed by Drs. S. D. Risley, Philadelphia; Edward C. Ellett, Memphis, Tenn.; W. H. Wilder, Chicago; E. E. Blaauw, Buffalo; Hunter H. Turner, Pittsburgh; L. Webster Fox, Philadelphia; Edgar S. Thomson, New York; Edward Jackson, Denver, and Meyer Wiener, St. Louis.

Dr. George S. Derby's paper on "Interstitial Keratitis, with Special Reference to the End-Result," was on motion, in the absence of Dr. Derby in Europe, read in abstract by the secretary, Dr. Edgar S. Thomson, New York. Discussed by Arnold Knapp, New York; J. A. Fordyce, New York; F. Park Lewis, Buffalo; R. L. Randolph, Baltimore; Hiram Woods, Baltimore; E. E. Holt, Portland, Me.; F. H. Verhoeff, Boston; H. F. Stoll, Hartford, Conn., and W. H. Wilder, Chicago.

Dr. Sydney Walker, Jr., Chicago, read a paper on "Present Status of Corneal Transplantation and Experimental Data." Discussed by Drs. John E. Weeks, New York, and Sydney Walker, Chicago.

Dr. George E. de Schweinitz, Philadelphia, moved that the secretary be requested to convey to Dr. George S. Derby, for this section, cordial greeting, and to express the hope that the opportunity which has fallen to him and his colleagues abroad shall meet abundant success and that he and they shall escape the harm and the hurt which would necessarily threaten them in their stimulating and patriotic line of duty.

Dr. John E. Weeks, New York, seconded the motion and it carried unamimously.

THURSDAY, JUNE 7—AFTERNOON

Dr. Henry H. Briggs, Asheville, N. C., read a paper on "Tendon Shortening." Discussed by Drs. Will P. Walter, Evanston, Ill.; J. W. Jervey, Greenville, S. C.; David W. Wells, Boston; Frank C. Todd, Minneapolis; Blech, Los Angeles; George A. Moore, Palmer, Mass., and Henry H. Briggs, Asheville, N. C.

Dr. Harry W. Woodruff, Joliet, Ill., read a paper on "Tendon Transplantation of the Eye Muscles." Discussed by Frank C. Todd, Minneapolis; Arthur S. Tenner, New York; Meyer Wiener, St. Louis, and Harry W. Woodruff, Joliet, Ill.

Dr. Leo J. Goldbach, Baltimore, read a paper on "Lymphatic Nodular Keratoconjunctivitis (Phlyctenules)."

Dr. Michael Goldenburg, Chicago, read a paper on "The Pathogenesis of Ophthalmia Eczematosa: A Preliminary Report."

These two papers were discussed by Drs. Richard J. Tivnen, Chicago; Hunter H. Turner, Pittsburgh; George F. Sullivan, Hoboken; H. W. Woodruff, Joliet, Ill.; A. E. Davis, New York; Leo J. Goldbach, Baltimore, and Michael Goldenburg, Chicago.

Drs. Aaron S. Green and Louis D. Green, San Francisco, presented a paper on "An Analysis of One Hundred and Forty-Six Consecutive Cases of Intracapsular Extraction of Senile Cataract." Discussed by Drs. H. F. Hansell, Philadelphia, and Aaron S. Green, San Francisco.

Dr. F. Park Lewis, Buffalo, introduced the following resolution:

Resolved, That the Section on Ophthalmology of the American Medical Association call the attention of the surgeons-general of the army and navy to the fact that conscripted men from regions infected with trachoma might be the source of a widespread epidemic of the disease, and that strict measures be adopted for the prevention of such a disaster. [Not transmitted to the House of Delegates.]

On motion the resolution was adopted.

Dr. William Zentmayer, the retiring chairman, made a few remarks thanking the section for assistance rendered and courtesies shown him.

Dr. Alexander Duane, the chairman elect, was inducted into office.

On motion of Dr. W. H. Wilder, Chicago, a vote of thanks was tendered to the retiring officers.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

WEDNESDAY, JUNE 6—MORNING

The section was called to order at 9:30 by the chairman, Dr. H. W. Longyear, Detroit.

Dr. Longyear read the chairman's address, entitled "The Relations of the Gynecologist to the General Surgeon, Past and Present."

Dr. C. Henry Davis, Chicago, read a paper on "The relative Efficiency and Toxicity of Chloroform, Ether and Nitrous Oxid-Oxygen in Pregnancy and Labor." Discussed by Drs. Isadore L. Hill, New York; John Osborn Polak, Brooklyn, and E. B. Craigin, New York.

Dr. Arnold Sturmdorf, New York, read a paper on "The Pathologic and Clinical Significance of Chronic Endocervicitis." Discussed by Drs. Thomas S. Cullen, Baltimore; J. Riddle Goffe, New York; Robert L. Dickinson, Brooklyn; Henry P. Newman, San Diego, Calif., and Arnold Sturmdorf, New York.

A joint meeting was held with the Section on Nervous and Mental Diseases.

Dr. Arthur Stein, New York, read a paper on "Influence of Labor on the Brain Development of the Child." Discussed by Drs. Frederick Peterson, New York; E. B. Cragin, New York; Charles K. Mills, Philadelphia; G. L. Brodhead, New York; E. D. Fisher, New York; Alfred B. Spalding, San Francisco; Samuel J. Drusgin, New York; Adolph Meyer, Baltimore; Hugh T. Patrick, Chicago; Starr, New York; J. Ransohoff Cincinnati; P. B. Salatich, New Orleans; Charles R. Ball, St .Paul; Henry P. Newman, San Diego, Calif., and Arthur Stein, New York.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. J. Morris Slemons, New Haven, Conn., read a paper on "The Value of Blood Pressure Estimations in the Practice of Obstetrics." Discussed by Drs. F. Ashley Faught, Philadelphia, and J. Morris Slemons, New Haven, Conn.

Dr. Frederick J. Taussig, St. Louis, read a paper on "Has the New Born Child with Sutured Cord a Better Start in Life? Comparative Study of 500 Cases." Discussed by Drs. George M. Boyd, Philadelphia; Charles S. Bacon, Chicago; Asa B. Davis, New York, and Frederick J. Taussig, St. Louis.

Dr. Jennings C. Litzenberg, Minneapolis, read a paper on "The Sacro-Iliac Joints in Obstetrics and Gynecology." Discussed by Drs. Edward Reynolds, Boston; Robert L. Dickinson, Brooklyn; Isadore L. Hill, New York, and Jennings C. Litzenberg, Minneapolis.

Dr. Alfred B. Spalding, San Francisco, read a paper on "Cesarean Section Scars: A Histologic Study of Four Specimens." Discussed by Drs. J. R. Losee, New York; Asa B. Davis, New York; James A. Harrar, New York; Nathaniel R. Mason, Boston; Clarence G. Bandler, New York; J. H. Carstens, Detroit; E. Gustav Zinke, Cincinnati, and Alfred B. Spalding, San Francisco.

Dr. Arthur H. Morse, New Haven, Conn., read a paper on "Premature Separation of the Normally Implanted Placenta." Discussed by Drs. James W. Markoe, New York; J. K. Quigley, Rochester, N. Y.; Alfred B. Spalding, San Francisco; Samuel J. Druskin, New York, and Arthur H. Morse, New Haven, Conn.

Dr. Louis J. Ladinski, New York, read a paper on "Ectopic Gestation." Discussed by Drs. E. Gustav Zinke, Cincinnati; J. H. Carstens, Detroit; William W. Golden, Elkins, W. Va.; Edward J. McOscar, Fort Wayne, Ind., and Louis J. Ladinski, New York.

THURSDAY, JUNE 7—MORNING

Dr. John W. Keefe, Providence, R. I., read a paper on "Prolapse of the Female Urethra." Discussed by Drs. Guy L. Hunner, Baltimore; Brooke M. Anspach, Philadelphia, and John W. Keefe, Providence, R. I.

Drs. Guy L. Hunner and George L. Stickney, Baltimore, presented a paper on "Further Notes on a Rare Type of Bladder Ulcer, with Report of Eighteen Cases." Discussed by Drs. Edward H. Richardson, Baltimore; D. N. Eisendrath, Chicago; Wineberg, N. Y.; Frank D. Reese, Cortlandt, N. Y.; P. B. Salatich, New Orleans; H. W. Longyear, Detroit, and Guy L. Hunner, Baltimore.

Dr. Axel F. W. Werelius, Chicago, read a paper on "Ureterotubal and Uretero-Uterine Anastomosis." Discussed by Drs. Julius H. Jacobson, Toledo, Ohio; Alfred A. Strauss, Chicago; D. N. Eisendrath, Chicago; P. B. Salatich, New Orleans; J. Henry Barbat, San Francisco; William P. Graves, Boston, and Axel F. W. Werelius, Chicago.

Dr. William P. Graves, Boston, read a paper on "Ovarian Organotherapy: A Preliminary Report." Discussed by Drs. Clarence G. Bandler, New York; Emil Novak, Baltimore; Lawrence W. Strong, New York; P. B. Salatich, New Orleans; Adam P. Leighton, Jr., Portland, Me., and William P. Graves, Boston.

Dr. Robert T. Morris, New York, read a paper on "Appendicitis and the Gynecologist." Discussed by Drs. John B. Deaver, Philadelphia; W. M. Polk, New York; Lee, New York; Emil Novak, Baltimore; Chester M. Echols, Milwaukee, Wis.; E. E. Montgomery, Philadelphia; Bernard Cohen, Buffalo; J. H. Carstens, Detroit; Guy L. Hunner, Baltimore, and Robert T. Morris, New York.

Dr. Robert E. Farr, Minneapolis, read a paper on "Technic and Scope of Local Anesthesia in Abdominal Surgery," illustrated by motion pictures. Discussed by Drs. Charles F. Nassau, Philadelphia; F. J. Keller, Patterson, N. J.; J. H. Jacobson, Toledo, Ohio; P. B. Salatich, New Orleans, and Robert E. Farr, Minneapolis.

THURSDAY, JUNE 7—AFTERNOON

The following officers were elected: chairman, Dr. Brooke M. Anspach, Philadelphia; vice chairman, Dr. R. E. Skeel, Cleveland; secretary, Dr. Sidney A. Chalfant, Pittsburgh; delegate, Dr. Horace G. Wetherill, Denver; alternate, Dr. Thomas S. Cullen, Baltimore.

Dr. John Osborn Polak, Brooklyn, read a paper on "Why the Menstrual Function Should Be Preserved in Double Suppurative Disease of the Tubes." Discussed by Drs. E. E. Montgomery, Philadelphia; Bertha Van Hoosen, Chicago; H. J. Boldt, New York; Harvey P. Jack, Hornell, N. Y.; R. H. Gibbons, New York; H. O. Marcy, Boston, and John Osborn Polak, Brooklyn.

Dr. Daniel N. Eisendrath, Chicago, read a paper on "Causes of Recurrence After Operations on the Bile Passages." Discussed by Drs. W. Wayne Babcock, Philadelphia; John B. Deaver, Philadelphia; E. MacD. Stanton, Schnectady, N. Y., and R. H. Gibbons, New York.

Dr. John B. Deaver, Philadelphia, read a paper on "Acute Pancreatitis." Discussed by Drs. Russell S. Fowler, Brooklyn, and R. H. Gibbons, New York.

Dr. Charles A. L. Reed, Cincinnati, read a paper on "Physiologic Colectomy." Discussed by Drs. Willard Bartlett, St. Louis; John G. Clark, Philadelphia; Fenton B. Turck, New York; Alfred A. Strauss, Chicago; R. H. Gibbons, New York, and Charles A. L. Reed, Cincinnati.

Dr. William J. Mayo, Rochester, Minn., read a paper on "Diverticulitis of the Large Intestine." Discussed by Drs. Roberts, Brooklyn; Miles F. Porter, Fort Wayne, Ind., and W. J. Mayo, Rochester, Minn.

Dr. J. Shelton Horsley, Richmond, Va., read a paper on "Personal Experience in the Surgical Treatment of Intestinal Stasis." Discussed by Drs. John W. Draper, New York, and Richard E. Brown, New York.

FRIDAY, JUNE 8—MORNING

Dr. Miles F. Porter, Fort Wayne, Ind., read a paper on "Cholecystostomy Versus Cholecystectomy." Discussed by Drs. Howard Lilienthal, New York; H. J. Boldt, New York; J. H. Carstens, Detroit; D. C. Strong, San Bernardino, Calif.; J. W. Vaughan, Detroit, and Miles F. Porter, Fort Wayne, Ind.

A telegram was received from Dr. Louis Frank, Louisville, Ky., offering to forward his paper that it might be read by title and published if it might be so received. It was stated that under the ruling of the House of Delegates, papers could not be published unless read in the section.

Dr. Horace G. Wetherill, Denver, delegate of the section to the House of Delegates, expressed his appreciation of election as delegate, and also his regret since he was necessarily absent from the scientific work.

A motion to thank Dr. Wetherill for his work as delegate to the House of Delegates was seconded and carried.

Dr. Stuart McGuire, Richmond, Va., read a paper on "Preparation of Anemic Patients for Operation." Discussed by Drs. Sidney A. Chalfant, Pittsburgh; Howard Lilienthal, New York; H. J. Boldt, New York, and P. B. Salatich, New Orleans.

Dr. J. Walter Vaughan, Detroit, read a paper on "When Is Cancer Operable?" Discussed by Drs. Henry Schmitz, Chicago; Clarence G. Bandler, New York, and J. Walter Vaughan, Detroit.

Dr. James F. Percy, Galesburg, Ill., read a paper on "The End-Results of the Treatment of Inoperable Uterine Cancer by Heat." Discussed by Drs. Herman J. Boldt, New York; F. Walcott Bancroft, New York; Leonard, New York; George B. Ward, New York; J. Shelton Horsley, Richmond, Va.; H. C. Bailey, New York; Frank L. Newton, Boston, and James F. Percy, Galesburg, Ill.

Dr. Henry Schmitz, Chicago, read a paper on "The Present Status of Radium Therapy in Diseases of Women." Discussed by Drs. Anthony Joseph Mendillo, New Haven, Conn., and Henry Schmitz, Chicago.

Dr. Abraham J. Rongy, New York, read a paper on "Prolapsus Uteri and Its Treatment." Discussed by Drs. Frank L. Newton, Boston; Jacob A. Ruben, Pittsburgh; Harry Aranow, New York; Harvey P. Jack, Hornell, N. Y., and Abraham J. Rongy, New York.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order by the chairman, Dr. Francis P. Emerson, Boston. Dr. Emerson then read the Chairman's Address.

Dr. George L. Richards, Fall River, Mass., moved that the Committee appointed at the Atlantic City meeting, consisting of Charles W. Richardson, Washington; H. P. Mosher, Boston and Burt R. Shurly, Detroit, be retained by this section. Motion seconded and carried.

Dr. Hubert Arrowsmith, Brooklyn, read a paper on "Peroral Endoscopy in the Diagnosis and Treatment of Diseased Conditions of the Respiratory and Upper Digestive Tracts." Discussed by Drs. Samuel Iglauer, Cincinnati; H. W. Frauenthal, New York; Chevalier Jackson, Philadelphia, and H. P. Mosher, Boston.

Major Theodore Charles Lyster, Washington, D. C., gave a short talk on the work of the men of this section in the present war.

Dr. Chevalier Jackson, Philadelphia, read a paper on "The Etiology of Foreign Bodies in the Larynx, Trachea, Bronchi

and Esophagus," with lantern demonstration. Discussed by Drs. Harris P. Mosher, Boston; Jacques Holinger, Chicago, and S. A. Friedberg, Chicago.

Dr. Joseph C. Beck, Chicago, read a paper on "The Surgery of the Tongue," with lantern demonstration. Discussed by Drs. George F. Keiper, Lafayette, Ind.; Sargent F. Snow, Syracuse, N. Y.; Lee M. Hurd, New York, and William R. Butt, Canton, Ohio.

Dr. Wendell C. Phillips of New York, presented moving pictures of a Simple Mastoid Operation.

Wednesday, June 6—Afternoon

Dr. Edward B. Dench, New York, read a paper on "Indications for the Mastoid Operation in Acute Otitis Media." Discussed by Drs. John F. Barnhill, Indianapolis; George W. MacKenzie, Philadelphia; George F. Keiper, Lafayette, Ind., and C. R. Holmes, Cincinnati.

Dr. Norval H. Pierce, Chicago, presented moving pictures of an operation on the ethmoid.

Dr. Norval H. Pierce, Chicago, read a paper on "Pathologic Conditions of the Nose, Epipharynx and Pharynx as Etiologic Factors in Aural Disease." Discussed by Drs. Cullen F. Welty, San Francisco, and George E. Shambaugh, Chicago.

Dr. Cullen F. Welty, San Francisco, read a paper on "Indications for the Radical Mastoid Operation." Discussed by Drs. Jacques Holinger, Chicago; George W. MacKenzie, Philadelphia, and Joseph C. Beck, Chicago.

Dr. John E. MacKenty, New York, read a paper on "Hemilaryngectomy and Total Laryngectomy," with lantern demonstration. Discussed by Drs. D. Crosby Greene, Boston; Henry W. Horn, San Francisco; Joseph C. Beck, Chicago, and La Fayette Page, Indianapolis.

Dr. Charles W. Richardson, Washington, D. C., read a paper on "Treatment of Acute Pulmonary Abscess." Discussed by Dr. George F. Cott, Buffalo, who presented lantern slides.

Dr. Otto J. Stein, Chicago, read a paper on "Sudden and Profound Loss of Hearing; Its Significance." Discussed by Drs. Henry S. Wieder, Philadelphia; T. O. Edgar, Dixon, Ill., and Cullen F. Welty, San Francisco.

Thursday, June 7—Morning

Dr. Louis Ostrom, Jr., Rock Island, Ill., showed a tonsil instrument, a modification of the Sluder tonsillotome.

Dr. A. A. Hayden, Chicago, showed a pillar suturing apparatus for the tonsil.

The chairman appointed the following committees:

Committee on Necrology: Drs. A. B. Duel and Emil Mayer.

Nominating Committee: Drs. H. W. Loeb, H. P. Mosher and Norval H. Pierce.

Dr. Greenfield Sluder, St. Louis, read a paper on "A Surgical Consideration of the Upper Paranasal Cells." Discussed by Drs. H. Holbrook Curtis, New York and Lee M. Hurd, New York.

The following papers were read as a symposium on "Vertigo."

Dr. George E. Shambaugh, Chicago: "Vertigo as a Symptom of Primary Disease of the Labyrinth."

Dr. Philip D. Kerrison, New York: "Aural Vertigo Occurring in Suppurative Disease of the Ear."

Dr. Theadore H. Weisenburg, Philadelphia: "Vertigo in Intracranial Disease."

Dr. Isaac H. Jones, Philadelphia: "Diagnosis of Vertigo, from Whatever Cause, by Ear Tests," with lantern demonstration.

These four papers were discussed by Drs. H. T. Patrick, Chicago; Wells P. Eagleton, Newark, N. J.; George W. MacKenzie, Philadelphia; Lewis Fisher, Philadelphia; E. L. Myers, St. Louis; Norval H. Pierce, Chicago; George F. Keiper, Lafayette, Ind.; Philip D. Kerrison, New York, and A. A. Hayden, Chicago.

Thursday, June 7—Afternoon

Dr. T. J. Harris moved that the Executive Committee of this section be instructed to investingate, and report at the next meeting of this section, on the advisability of establishing a new journal on otolaryngology. Seconded and carried.

Dr. Elmer L. Kenyon moved that the Executive Committee be authorized and instructed to cooperate with the Board of Trustees in carrying out the new plans with reference to the publication of section papers. Seconded and carried.

The following officers were elected: chairman, Dr. Greenfield Sluder, St. Louis; vice chairman, Dr. Philip D. Kerrison, New York; secretary, Dr. L. W. Dean, Iowa City, Iowa; delegate, Dr. George L. Richards, Fall River; alternate, Dr. Ross H. Skillern, Philadelphia.

Dr. Emil Mayer read the report of the Committee on Necrology, which included the obituaries of Dr. Hudson K. Makuen, New York, and Dr. David Braden Kyle, Philadelphia.

Dr. Mayer also reported the successful result of the appeal to the physicians in the case of the widow of Dr. Jules Broeckaert, of Belgium.

Dr. T. J. Harris moved that the thanks of this section be extended to Dr. Emil Mayer for his work in connection with the Broeckaert Fund. Seconded and carried.

Dr. W. B. Chamberlain moved that the chairman appoint a committee of three to act as a permanent necrology committee. The chairman appointed, as this committee, Drs. Emil Mayer, W. B. Chamberlain, and T. J. Harris.

Dr. Dayton C. Miller, Cleveland, read a paper on "The Science of Musical Sounds." Discussed by Drs. H. P. Mosher, Boston; W. B. Swift, Boston; Jacques Holinger, Chicago, and Bertha Carol Downing, Worcester, Mass.

Dr. George L. Richards, Fall River, Mass., read a paper on "The Hearing Test from a Practical Standpoint." Discussed by Drs. W. B. Chamberlain, Cleveland; Cullen F. Welty, San Francisco; George W. MacKenzie, Philadelphia, and Jacques Holinger, Chicago.

Friday, June 8—Morning

Dr. Henry W. Horn, San Francisco, read a paper on "The End-Results in the Treatment of Ozena by Means of Vaccine," with lantern demonstration. Discussed by Drs. J. G. Dwyer, New York; Thomas J. Harris, New York; L. A. Coffin, New York; H. W. Frauenthal, New York, and William R. Murray, Minneapolis.

Dr. Ross H. Skillern, Philadelphia, read a paper on "The Diagnosis and Treatment of Sinusitis in Infants." Discussed by Drs. Albert H. Beifield, Iowa City, Iowa; L. A. Coffin, New York, and Greenfield Sluder, St. Louis.

Dr. Lewis Fisher, Philadelphia, read a paper on "Simplicity of Technic in Submucous Resection of the Septum," with lantern demonstration. Discussed by Drs. W. W. Carter, New York; William R. Butt, Canton, Ohio; J. D. Lewis, Minneapolis; T. R. Chambers, Jersey City, and Emil Mayer, New York.

Dr. Greenfield Sluder presented forceps for dealing with the lateral wall of the antrum. These forceps are analogous to the exploratory puncture of the needle in the lower meatus.

Dr. Elmer L. Kenyon, Chicago, read a paper on "Disturbances of Voice Following Tonsillectomy: Their Causes and Prevention," with lantern demonstration. Discussed by Drs. I. W. Voorhees, New York; W. B. Swift, Boston; H. P. Mosher, Boston; D. J. McDonald, New York, and Jacob Braun, New York.

Dr. Julius Dworetzky, Otisville, N. Y., read a paper on "The Diagnosis of Tuberculous Laryngitis," with lantern demonstration. Discussed by Drs. H. W. Frauenthal, New York, and Emil Mayer, New York.

Dr. H. P. Mosher moved that vote of thanks be extended to the New York men for their work in connection with this meeting. Seconded and carried.

The retiring chairman, Dr. Francis P. Emerson, introduced the chairman-elect Dr. Greenfield Sluder, who expressed his appreciation of the honor conferred on him.

Dr. Emil Mayer moved that a vote of thanks be extended to the retiring officers for their work in making this program as valuable in a scientific way as any that has ever been presented before the section.

SECTION ON DISEASES OF CHILDREN

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order at 9:10 by the chairman, Dr. J. P. Sedgwick, Minneapolis. Dr. Sedgwick read the chairman's address, entitled "The Institution, Reestablishment and Maintenance of Breast Feeding." No discussion.

Dr. Isaac A. Abt, Chicago, read a paper on "The Technic of Wetnurse Management in Institutions." Discussed by Drs. Fritz Talbot, Boston; Henry M. Silver, New York; Jacob Sobel, New York; Richard J. E. Scott, New York; Charles Herrman, New York; Owen H. Wilson, Nashville, Tenn.; Charles L. Summers, Winston-Salem, N. C.; Leo Wolf, Buffalo; Frank S. Churchill, Chicago; E. J. Huenekens, Minneapolis; Chappell, Grand Rapids, Mich., and Isaac A. Abt, Chicago.

Dr. Bert R. Hoobler, Detroit, read a paper on "Problems Connected with the Production and Collection of Human Milk." Discussed by Drs. Thomas S. Southworth, New York; Henry I. Bowditch, Boston; William P. Lucas, San Francisco; Louis H. Schwartz, New York; Lawrence T. Royster, Norfolk, Va.; L. R. DeBuys, New Orleans; Walter J. Heimann, New York; R. R. Ferguson, Chicago; T. C. McCleave, Oakland, Calif.; Faison, Charlotte, N. C.; Oliver Hill, Knoxville, Tenn.; F. N. Rogers, Manchester, N. H.; Bert R. Hoobler, Detroit.

Dr. Harry M. McClanahan, Omaha, read a paper on "The Use of Lactic Bacilli Milk." Discussed by Drs. J. P. Crozer Griffith, Philadelphia, and Harry M. McClanahan, Omaha.

Dr. Thomas S. Southworth, New York, read a paper on "The Familial Tendency to Fat Incapacity in Infancy and Childhood." Discussed by Drs. Louis C. Ager, Brooklyn; Frank C. Neff, Kansas City, Mo.; Fritz Talbot, Boston; Bert R. Hoobler, Detroit; David E. English, Summit, N. J., and Thomas S. Southworth, New York.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. Harry M. McClanahan explained to the members of the section about the action taken by the House of Delegates reducing the units allowed this section, which would result in decreasing the number of papers read to about half the number generally presented. Discussed by Drs. Isaac A. Abt, Chicago; William P. Lucas, San Francisco; Clifford G. Grulee, Chicago; L. R. DeBuys, New Orleans; T. C. McCleave, Oakland, Calif.; Richard J. E. Scott, New York; R. R. Ferguson, Chicago, and J. P. Sedgwick, Minneapolis.

Dr. William P. Lucas, San Francisco, made a motion that the chairman appoint a committee to draw up a protest to be presented tomorrow to the House of Delegates, in reference to its action in decreasing the units allowed this section, and that the entire section adjourn at 2 o'clock and proceed to the House of Delegates with our committee.

Seconded, and carried unanimously.

The chairman appointed the following committee as above outlined: Dr. William P. Lucas, San Francisco; Dr. Isaac A. Abt, Chicago; Dr. E. C. Fleischner, San Francisco.

Drs. E. C. Fleischner and K. F. Meyer, San Francisco, presented a paper on "Observations on the Presence of the Bacillus Abortus in Certified Milk." Discussed by J. P. Sedgwick, Minneapolis, and E. C. Fleischner, San Francisco.

Dr. Clifford G. Grulee, Chicago, read a paper on "Rumination in the First Year of Life." Discussed by Drs. R. Taylor, Minneapolis; John Lovett Morse, Boston; James H. Kerley, New York; I. H. Goldberg, New York, and Clifford G. Grulee, Chicago.

Drs. Lawrence R. DeBuys and Adolph Henriques, New Orleans, presented a paper on "The Effect of Body Posture on the Position and Emptying Time of the Stomach." Discussed by Drs. Louis C. Ager, Brooklyn; R. Taylor of Minneapolis, and L. R. DeBuys, New Orleans.

Dr. Louis Fischer, New York, read a paper on "Recent Literature Pertaining to Vitamins: Their Application in Infant Feeding." Discussed by Drs. Richard J. E. Scott, New York; Thomas S. Southworth, New York; I. H. Goldberger, New York, and Louis Fischer of New York.

Dr. William P. Lucas, San Francisco, read a paper on "A Study of Diarrheal Conditions Found in California, Especially in San Francisco, and a Comparison of Such Conditions in California and on the Atlantic Seacoast." Discussed by Drs. Lawrence T. Royster, Norfolk, Va.; Henry I. Bowditch, Boston; Jacob Sobal, New York; Isaac A. Abt, Chicago, and William P. Lucas, San Francisco.

Dr. Henry D. Chapin, New York, read a paper on "A Comparison Between Clinical Examination and Roentgenograms in Diseases of the Chest." Discussed by Drs. John Lovett Morse, Boston; A. C. Eastman, Springfield, Mass.; J. E. Benjamin, Cincinnati; I. S. Hirsch, New York, and E. S. Rimer, New York.

Dr. Isaac A. Abt, Chicago, chairman of the committee appointed to present protest to the House of Delegates, reported.

THURSDAY, JUNE 7—MORNING

Dr. Henry J. Cartin, Johnstown, Pa., read a paper on "Intubation of the Larynx." Discussed by J. F. Hogan, Baltimore; H. L. Whitney, Plymouth, Pa.; A. J. Bell, Cincinnati; Isaac A. Abt, Chicago, and Lawrence T. Royster, Norfolk, Va.

Dr. J. P. Crozer Griffith, Philadelphia, read a paper on "The Weight of Clothing in the First Five Years of Life." Discussed by Drs. Frank C. Neff, Kansas City, Mo., and J. P. C. Griffith, Philadelphia.

Dr. John Lovett Morse, Boston, read a paper on "Edebohls' Operation in Nephritis in Childhood." Discussed by Drs. J. S. Wall, Washington, and J. L. Morse, Boston.

Dr. Julius H. Hess, Chicago, read a paper on "Diagnosis of the Age of the Fetus by Roentgenograms." No discussion.

Drs. Albert Graeme Mitchell and J. Claxton Gittings, Philadelphia, presented a paper on "Phenolsulphonephthalein Elimination in Infants and Children." Discussed by Drs. J. P. Sedgwick, Minneapolis; J. S. Leopold, New York; J. L. Morse, Boston, and J. Claxton Gittings, Philadelphia.

Dr. Edgar J. Huenekens, Minneapolis, read a paper on "The Prophylactic Use of Pertussis Vaccine, Controlled by the Complement Fixation Test." Discussed by Drs. Alfred Hess, New York; John Foote, Washington, D. C.; H. L. F. Locke, Hartford, Conn.; Fisher, New York; Faison, Charlotte, N. C.; Luttinger, New York, and E. J. Huenekens, Minneapolis.

By unanimous vote it was decided to proceed immediately with the afternoon's program as, at the committee's suggestion, the entire section was to adjourn to the meeting of the House of Delegates in the afternoon, to protest against the proposed reduction in the time allotted the section.

The following officers were elected: chairman, Dr. Lawrence R. DeBuys, New Orleans; vice chairman, Dr. Richard M. Smith, Boston; delegate, Dr. T. C. McCleave, Oakland, Calif.

Dr. Richard M. Smith, Boston, read a paper on "Pyelitis in Infants: The Phenolsulphonephthalein Test."

Dr. Henry F. Helmholz, Evanston, Ill., read a paper on "Experimental Pyelitis in the Rabbit."

THURSDAY, JUNE 7—AFTERNOON

The section met, according to agreement, at the Academy of Medecine, where the House of Delegates was in session, and stayed the entire afternoon until the question of the reduction of the time allotted the Section on Diseases of Children was reached. The privilege of the floor of the House was accorded Dr. Isaac A. Abt, Chicago, who then presented to the House of Delegates the protest of the section. The House of Delegates finally assigned six units to each section of the Scientific Assembly.

At 5:45 the chairman called the section to order, and the following papers were read by title:

"A Series of Trophoneuroses, Probably Due to Infection," by Dr. Albert H. Beifeld, Iowa City, Iowa.

"Desensitization in the Treatment of Infantile Eczema," by Dr. Thomas B. Cooley, Detroit.

"The Allen Treatment of Diabetes in Children," by Charles E. Hansel, South Bend, Ind.

"The Method of Determining the Exact Dose of Tuberculin for the Individual Child with Pulmonary Tuberculosis, Whether that Dose be the Initial or any Subsequent Dose," by Dr. Myer Solis Cohen, Philadelphia.

FRIDAY, JUNE 8—MORNING

A joint meeting was held with the Section on Nervous and Mental Diseases and the Section on Orthopedic Surgery. For a report of the proceedings, see the minutes of the Section on Orthopedic Surgery.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

WEDNESDAY, JUNE 6—MORNING

The section was called to order by the chairman, Dr. Albion W. Hewlett, San Francisco, at 9:15. Dr. Hewlett read the chairman's address, entitled "Cooperation Between Pharmacology and Therapeutics."

Dr. Torald Sollmann, Cleveland, read a paper on "Crucial Test of Therapeutic Evidence." Discussed by Dr. Samuel J. Meltzer, New York.

Dr. Samuel J. Meltzer, New York, demonstrated his apparatus for the administration of oxygen under pressure, with remarks on the efficiency of the procedure. Discussed by Drs. Solomon Solis-Cohen, Philadelphia; Noble P. Barnes, Washington, D. C., and Samuel J. Meltzer, New York.

Dr. James E. Talley, Philadelphia, read a paper on "Acidosis in Morphinism." Discussed by Drs. Fred I. Lackenbach, San Francisco; Torald Sollmann, Cleveland; Ernest S. Bishop, New York, and James E. Talley, Philadelphia.

Dr. Charles C. Lieb, New York, read a paper on "The Action of Alcohol on the Isolated Mammalian Heart." Discussed by Drs. Samuel J. Meltzer, New York; Torald Sollmann, Cleveland; Solomon Solis-Cohen, Philadelphia; Walter J. Wilson, Jr., Detroit; Samuel J. Meltzer, New York, and Charles C. Lieb, New York.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. Walter A. Bastedo, New York, read a paper on "A Discussion of Certain Measures for the Treatment of Pulmonary Edema in Pneumonia." Discussed by Drs. Samuel J. Meltzer, New York; Jacob Diner, New York; Walter J. Wilson, Jr., Detroit; Edward F. Wells, Chicago, and Walter A. Bastedo, New York.

The secretary, Dr. Cary Eggleston, New York, read the following resolution:

The Section on Pharmacology and Therapeutics instructs its delegate to the House of Delegates that it is the sense of this section that the question of the therapeutic value of alcohol, which has been long in dispute, remains yet undetermined, and that hasty action taken under the stress of present circumstances would not be wise or as reflecting the best therapeutic and pharmacologic opinion.

Furthermore, while recognizing the possible need of prohibition of the use of alcohol as a measure of public safety, it would ask that the two questions be considered separately on their respective merits. (See minutes, House of Delegates.)

Seconded by Dr. Torald Sollmann, Cleveland. Discussed by Drs. Samuel J. Meltzer, New York; William Benham Snow, New York; R. A. Hatcher, New York; Walter A. Bastedo, New York, and Jacob Diner, New York. Motion carried.

Dr. Cary Eggleston, New York, read a communication from the American Pharmaceutical Association moving that the members of this delegation who are not members of the Section on Pharmacology and Therapeutics be given the privilege of the floor. Motion carried

Dr. R. A. Hatcher, New York, read the following resolution:

The pharmaceutical service in the army is unsatisfactory because it is not recognized on a modern basis; there is no pharmaceutical corps devoted to the prosecutions of pharmaceutical duties. Pharmacists are compelled to enlist as privates without the hope of promotion to a commissioned rank as in the Dental and Veterinary Corps. A professionally trained pharmaceutical corps could be made invaluable to the Medical Corps as assistant both in the field and in hospitals. We earnestly urge the War Department to establish by congressional enactment a pharmaceutical corps with definite military standing and responsibilities. (See minutes, House of Delegates.)

Discussed by Drs. Torald Sollmann, Cleveland; J. F. Anderson, New Brunswick, N. J., and Fred I. Lackenbach, San Francisco.

Dr. Torald Sollmann, Cleveland, moved that the resolution be amended so that it be transmitted without an expression of opinion on the part of the section. Amendment seconded by Dr. Kirkland. Motion lost.

Original motion carried.

The following papers were read as a symposium on "Radioactive Therapeutic Measures":

Drs. Arthur Fenwick Holding and William Bayard Long, New York: "The Truth About the Therapeutic Value of Radioactive Methods," with lantern slides.

Dr. George E. Pfahler, Philadelphia: "The Possibilities and Limitations of Roentgenotherapy in Malignant Diseases," with lantern slides.

Dr. Henry K. Pancoast, Philadelphia: "Review of Cases of Sarcoma of the Throat and Sinuses Treated by Radium and Roentgen Rays."

Dr. Curtis F. Burnam, Baltimore: "New Growths of the Mediastinum, with Especial Reference to Their Treatment with Radium," with lantern slides.

Dr. Abraham G. Shortle, Albuquerque, N. M.: "Heliotherapy in the Treatment of Tuberculosis."

These five papers were discussed by Drs. William Benham Snow, New York; J. A. P. Millet, Boston; Albert Soiland, Los Angeles; C. E. Alliaume, Utica, N. Y.; George E. Pfahler, Philadelphia, and Curtis F. Burnam, Baltimore.

THURSDAY, JUNE 7—MORNING

The following officers were elected: chairman, Dr. Arthur D. Hirschfelder, Minneapolis; vice chairman, Dr. Walter A. Bastedo, New York; secretary, Dr. Cary Eggleston, New York; delegate, Dr. Albion W. Hewlett, San Francisco; alternate, Dr. Torald Sollmann, Cleveland.

Drs. Richard Weil and Russell L. Cecil, New York, presented a paper on "Observations on the Excretion of Dyes." Discussed by Drs. Arthur D. Hirschfelder, Minneapolis; R. A. Hatcher, New York; Fred I. Lackenbach, San Francisco; Otto Raubenheimer, Brooklyn; William Salant, Washington, D. C., and Russell L. Cecil, New York.

Dr. Walton Forest Dutton, Tulsa, Okla., read a paper on "Innovations in Intravenous Medication." Discussed by Drs. Fred I. Lackenbach, San Francisco; Torald Sollmann, Cleveland; Jacob Diner, New York; J. F. Anderson, New Brunswick, N. J.; Cary Eggleston, New York; Joseph L. Miller, Chicago; W. W. Tompkins, Charleston, W. Va.; Otto Raubenheimer, Brooklyn, and Walton Forest Dutton, Tulsa, Okla.

Dr. Joseph L. Miller, Chicago, read a paper on "The Nonspecificity of Vaccine Therapy." Discussed by Drs. Jacob Diner, Brooklyn; John F. Anderson, New Brunswick, N. J.; Abraham G. Shortle, Albuquerque, N. M.; Russell L. Cecil, New York; Torald Sollmann, Cleveland; Fred I. Lackenbach, San Francisco; Walton Forest Dutton, Tulsa, Okla.; R. G. Torrey, Philadelphia; Cleon W. Symonds, New York; W. W. Tompkins, Charleston, W. Va.; W. A. Womer, New Castle, Pa., and Joseph L. Miller, Chicago.

Dr. Newton E. Wayson, Washington, D. C., read a paper on "Prophylactic Use of Vaccines in the Great War." Discussed by Drs. Fred I. Lackenbach, San Francisco; J. F. Anderson, New Brunswick, N. J.; Herman Spitz, Nashville, Tenn.; Walton F. Dutton, Tulsa, Okla.; Carl C. Warden, Ann Arbor, Mich., and Newton E. Wayson, Washington, D. C.

THURSDAY, JUNE 7—AFTERNOON

Dr. Arthur D. Hirschfelder, Minneapolis, read a paper on "Further Studies on the Development of Edema in Mustard Oil Conjunctivitis." Discussed by Drs. Torald Sollmann, Cleveland, and Carl Voegtlin, Washington, D. C.

Drs. Henry F. Moore and Alan M. Chesney, New York, presented a paper on "Ethyl Hydrocuprein (Optochin) in the Treatment of Acute Lobar Pneumonia." Discussed by Drs. Arthur D. Hirschfelder, Minneapolis; Rufus I. Cole, New York, and Henry F. Moore, New York.

Drs. S. Marx White and R. Edwin Morris, Minneapolis, presented a paper on "A Study of the Eggleston Method of

Administering Digitalis." Discussed by Drs. Otto Raubenheimer, Brooklyn; Carl Voegtlin, Washington, D. C.; Harold Wilson, Detroit; Cary Eggleston, New York, and S. Marx White, Minneapolis.

Dr. Cary Eggleston, New York, read a paper on "Influence of Large Doses of Digitalis and Digitoxin on the Blood Pressures in Man." Discussed by Dr. S. Marx White, Minneapolis.

SECTION ON PATHOLOGY AND PHYSIOLOGY

WEDNESDAY, JUNE 6—MORNING

The section was called to order at 9:40 by the chairman, Dr. James Ewing, New York. Dr. Ewing read the chairman's address, entitled "The Influence of the War on Medical Science."

Dr. Dallas B. Phemister, having been called to the colors, was not present to read his paper, on "The Manner in Which Ossification Occurs in Different Pathologic Processes." It was directed that a minute be entered noting the cause of his absence.

Dr. W. Landram McFarland, New York, read a paper on "The Pigmentation of the Hind Gut: Its Clinical Significance." Discussed by Drs. R. A. Lambert, New York; Alfred F. Hess, New York; James Ewing, New York; John W. Draper, New York; J. M. Lynch, New York, and W. Landram McFarland, New York.

Dr. William Salant, Washington, D. C., read a paper on "The Importance of Diet as a Factor in the Production of Pathologic Changes." Discussed by Dr. Robert A. Hatcher, New York; Alfred F. Hess, New York, and William Salant, Washington, D. C.

Dr. W. M. L. Coplin, Philadelphia, read a paper on "Defective Angiogenesis as a Factor in the Production of Primary Renal Aplasia, Hypoplasia and Dysplasia." Discussed by Drs. James Ewing, New York, and W. M. L. Coplin, Philadelphia.

WEDNESDAY, JUNE 6—AFTERNOON

The chairman announced that in the evening at 9 o'clock, on the eighth floor of the Hotel Astor, an examination would be held for applicants for the Aviation Corps, at which time twenty-five men would be examined, affording an opportunity to see the application of the rather unique tests required.

Drs. J. H. Black and R. B. McBride, Dallas, Texas, presented a paper on "The Colloidal Gold Chlorid Test: The Nature of the Solution and Its Application to Diseases of the Central Nervous System."

Dr. Lloyd D. Felton, Baltimore, read a paper on "Cerebrospinal Fluid and the Colloidal Gold Chlorid Test."

These two papers were discussed by Drs. L. H. Cornwall, New York; S. S. Hindman, Toledo, Ohio; A. M. Moody, Chicago; J. H. Black, Dallas, Texas, and Lloyd D. Felton, Baltimore.

Dr. Carl C. Warden, Ann Arbor, Mich., read a paper on "The Nature of the Syphilitic Antigen." No discussion.

Drs. P. T. Bohan and L. A. Lynch, Kansas City, Mo., presented a paper on "A More Delicate Wassermann Reaction Depending on the Use of Larger Quantities of Blood Serum." Discussed by Drs. Benjamin Gruskin, Chicago; J. W. Smith, Jr., New York; S. S. Hindman, Chicago; James Ewing, New York, and L. A. Lynch, Kansas City, Mo.

Dr. Albert J. Hodgson, Waukesha, Wis., read a paper on "Clinical Evidence of Distinct Types in the Pathology of Diabetes Mellitus." Discussed by Drs. E. P. Joslin, Boston, and A. J. Hodgson, Waukesha, Wis.

THURSDAY, JUNE 7—MORNING

Dr. Harry Dubin, Philadelphia, read a paper on "The Relation Between Bile and Phenol Production in the Intestine." Discussed by Drs. I. O. Palefski, New York, and Harry Dubin, Philadelphia.

Dr. R. B. Gradwohl, St. Louis, read a paper on "A Comparison of the Chemical Findings in Blood and Spinal Fluid, with Special Reference to Urea Nitrogen, Uric Acid, Creatinin and Sugar." Discussed by Drs. Jerome S. Leopold, New York; Ernest Bishop, New York, and R. B. H. Gradwohl, St. Louis.

Dr. Louis F. Bishop, New York, read a paper on "The Pathologic Physiology of the Heart as Revealed by the Polygraph and Electrocardiograph." No discussion.

Dr. W. G. MacCallum, New York, read a paper on "An Apparatus for the Study of Dissociation of Oxyhemoglobin." No discussion.

Drs. Isaac Levin and B. Joseph, New York, presented a paper on "The Morphologic Appearance of Cancer Clinically Cured by Means of Radium and Roentgen Rays." Discussed by Drs. Henry Schmitz, Chicago; Albert Woelfel, Chicago; James Ewing, New York, and Isaac Levin, New York.

Dr. Louis B. Wilson, Rochester, Minn., read a paper on "Experimental Lesions in the Cervical Sympathetic Ganglions and Thyroids of Goats." Discussed by Drs. S. B. Wolbach, Boston, and Louis B. Wilson, Rochester, Minn.

Dr. S. Frederic Coonley and Stanley L. Wang, New York, presented a paper on "The Occurrence of Tubercle Bacilli in the Breast Milk of Tuberculous Women." No discussion.

THURSDAY, JUNE 7—AFTERNOON

The following officers were elected: chairman, Dr. Louis B. Wilson, Rochester, Minn.; vice chairman, Dr. Francis Carter Wood, New York; secretary, Isabella C. Herb, Chicago.

Dr. Eli Moschowitz, New York, read a paper entitled "A Critique of Banti's Disease." No discussion.

Dr. Edward C. Rosenow, Rochester, Minn., read a paper on "Immunologic Studies in Poliomyelitis." Discussed by Drs. Myer Solis Cohen, Philadelphia; C. G. Bull, New York; J. M. Rosenthal, Philadelphia, and Edward C. Rosenow, Rochester, Minn.

Dr. John Saliba, Elizabeth City, N. C., read a paper on "Ether Therapy in Surgical Infections and Its Effect on Immunity." No discussion.

Dr. S. B. Wohlbach, Boston, read a paper on "The Etiology and Pathology of Rocky Mountain Spotted Fever." Discussed by Drs. Louis B. Wilson, Rochester, Minn., and S. B. Wohlbach, Boston.

Dr. William Litterer, Nashville, Tenn., read a paper on "Study of the Streptothrix Isolated in Two Cases of Rat-Bite Fever." No discussion.

FRIDAY, JUNE 8—MORNING

A joint meeting was held with the Section on Surgery, General and Abdominal. For a report of the proceedings, see the minutes of that section.

SECTION ON STOMATOLOGY

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order at 9:45 a. m. by the chairman, Dr. Arthur D. Black, Chicago.

The following papers were read as a symposium on "The Principles Involved in Chronic Mouth Infections in Their Relation to General Diseases":

Dr. Arthur D. Black, Chicago: "Roentgenographic and Microscopic Studies of the Tissues Involved in Chronic Mouth Infections" (Chairman's Address).

Discussed by Drs. T. L. Gilmer, Chicago; G. O. Mills, New York; John E. Nyman, Chicago; E. T. R. Rhein, New York; Arthur Zentler, New York; Augustus S. Dowling, and Louis Goldstine, New York.

Dr. Kurt H. Thoma, Boston: "Chronic Diseases of the Mouth of Interest to both Physician and Dentist."

Meyer L. Rhein, New York: "The Retention of Devitalized Teeth Without Danger of Focal Infection."

These two papers were discussed by Drs. G. O. Mills, New York; Morris I. Schamberg, New York; T. W. Brophy, Chicago; Louis Goldstine, New York; Frederick B. Moorehead, Chicago; Arthur Zentler, New York; Meyer L. Rhein, New York; Kurt H. Thoma, Boston, and Arthur D. Black, Chicago.

Dr. William C. Fisher, New York, proposed the following resolution, which was carried:

To the House of Delegates: **The following resolutions were passed by the Section on Stomatology and were recommended to your body for favorable consideration:**

Resolved, That applicants for associate fellowship in the American Medical Association holding the degree of D.D.S. or its equivalent and members of their local county or state dental organizations before their application is approved by the section must be considered by the executive committee of the section and must be endorsed by at least two members of this executive committee as having attained to a position in the dental profession, either by virtue of original research work done or some meritorious service rendered to the profession or public which shall, in the judgment of these members of the executive committee of the section, warrant favorable action on the application. (See minutes, House of Delegates.)

WEDNESDAY, JUNE 6—AFTERNOON

The meeting was called to order at 2 p. m. by the chairman, Dr. Arthur D. Black, Chicago.

The following officers were elected: chairman, Dr. Frederick B. Noyes, Chicago; vice chairman, Dr. Henry S. Dunning, New York; secretary, Dr. Eugene S. Talbot, Chicago; delegate, Dr. William C. Fisher, New York; Executive Committee, Thomas L. Gilmer, Chicago, and Frederick B. Moorehead, Chicago.

The secretary, Dr. E. E. S. Talbot, Chicago, presented a number of applications for membership which were referred to the Executive Committee for investigation and report.

The secretary was directed to forward a letter of good wishes to Vice Chairman Henry S. Dunning, in France.

The following papers were read as a symposium on "Cancer of the Oral Cavity":

Dr. L. Duncan Bulkley, New York: "Epithelioma or Cancer of the Oral Cavity."

Drs. John W. Bransfield and George M. Dorrance, Philadelphia: "Treatment of Cancer of the Mouth by Electrical Cautery, With or Without Operative Measures."

These two papers were discussed by Drs. Joseph C. Bloodgood, Baltimore; Morris I. Schamberg, New York; Vilray P. Blair, St. Louis; Louis C. LeRoy, New York; M. C. Smith, Lynn, Mass.; Thomas L. Gilmer, Chicago; Frederick B. Moorehead, Chicago; L. Duncan Bulkley, New York; George M. Dorrance, Philadelphia, and Arthur D. Black, Chicago.

Dr. Joseph M. Levy, New York, read a paper on "Preliminary Report of Investigations as to the Frequency of Metastatic Eye Infections from Primary Dental Foci." Discussed by Drs. Meyer L. Rhein, New York; Morris I. Schamberg, New York; James Kelsey, Erie, Pa.; G. V. I. Brown, Milwaukee, Wis., and Joseph M. Levy, New York.

THURSDAY, JUNE 7—AFTERNOON

Dr. John B. Roberts, Philadelphia, read a paper on "A Composite Osteoplastic Closure of Clefts of the Hard Palate." Discussed by Drs. George V. I. Brown, Milwaukee, Wis.; T. W. Brophy, Chicago, and John B. Roberts, Philadelphia.

Dr. Morris I. Schamberg, New York, read a paper on "Bone Surgery as Applied to the Jaws, with Special Reference to Bone Regeneration."

Dr. T. W. Brophy, Chicago, introduced a patient with cleft palate.

Dr. George V. I. Brown, Milwaukee, Wis., read a paper on "A New Operation for the Immediate Surgical Separation of the Superior Maxillary Bones to Widen the Nares for the Improvement of Respiratory and Other Conditions."

These two papers were discussed by Drs. John B. Roberts, Philadelphia; F. L. Stanton, New York; R. E. Mercer, New York; T. W. Brophy, Chicago, and George V. I. Brown, Milwaukee, Wis.

Dr. W. Wayne Babcock, Philadelphia, read a paper on "'Soup Bone' Implants for the Correction of Defects of the Skull and Face." Discussed by Drs. George V. I. Brown, Milwaukee, Wis.; T. W. Brophy, Chicago; W. J. Younger, Paris; C. B. Cortright, Brooklyn; Morris I. Schamberg, New York, and W. Wayne Babcock, Philadelphia.

Dr. William C. Fisher reported the adoption by the House of Delegates of the resolution passed by the section on the preceding day.

SECTION ON NERVOUS AND MENTAL DISEASES

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order by the chairman, Dr. Bernard Sachs, New York.

Dr. Bernard Sachs, New York, read the chairman's address, entitled "The Truth About Intraspinal Injections in the Treatment of Syphilis of the Nervous System."

Dr. Bernard Sachs, chairman, said that it seemed advisable to the section yesterday, in the report to the Council of Scientific Assembly, that among other sections, the neurologic section was to be reduced to three units in any given meeting, and not to exceed six papers in any given unit. Dr. Sachs said the reduction from five units to three would materially restrict the program. He would ask that a resolution be drawn up to be presented at the next meeting.

Dr. C. R. Ball, St. Paul, moved that an energetic protest be made against reduction of the section to three units.

Dr. C. F. MacDonald, New York, seconded this motion, which was unanimously carried after being discussed by Dr. G. A. Moleen, Denver, and Dr. Bernard Sachs, New York.

Dr. C. R. Ball moved that a committee of five be appointed to draw up an energetic protest to present to the House of Delegates against any reduction of the units of the section. This motion was carried after being discussed by Dr. W. A. Jones, Minneapolis; Dr. Bernard Sachs, New York; Dr. A. L. Skoog, Kansas City, Mo., and Dr. Woodson, Cincinnati.

The chairman then appointed a committee consisting of Dr. J. Ramsay Hunt, New York; Dr. C. R. Ball, St. Paul; Dr. Peter Bassoe, Chicago; Dr. H. T. Patrick, Chicago, and Dr. Adolf Meyer, Baltimore, to draw up a protest to present to the House of Delegates. (Communication not received by House of Delegates).

Dr. Pearce Bailey, New York, addressed the meeting on the subject of "Neurologic and Psychiatric Units for Army and Navy Hygiene." Dr. W. I. Wolfstein, Cincinnati, suggested the advisability of distributing literature to the section on the subject.

Dr. Adolf Meyer, Baltimore, read a paper on "Progress in Psychiatric Teaching." Discussed by Drs. Ernest Zueblin, Cincinnati; Tom A. Williams, Washington, D. C., and Adolf Meyer, Baltimore.

Dr. Owen Copp, Philadelphia, read a paper on "State Organization for Mental Hygiene." Discussed by Drs. Adolf Meyer, Baltimore; E. E. Mayer, Pittsburgh, and Leo M. Crafts, Minneapolis.

A joint meeting was held with the Section on Obstetrics, Gynecology and Abdominal Surgery. For a report of the proceedings, see the minutes of that section.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. David I. Wolfstein, Cincinnati, read a paper on "Hysterical Lethargy." Discussed by Drs. H. T. Patrick, Chicago; T. Diller, Pittsburgh; Joseph Collins, New York; D. S. Booth, St. Louis; Tom A. Williams, Washington, D. C.; Charles W. Kidder, Woodstock, Vt.; H. I. Gosline, Trenton, N. J., and David I. Wolfstein, Cincinnati.

Dr Francis R. Fry, St. Louis, read a paper on "The Neurasthenic at the Threshold."

Dr. Theodore Diller, Pittsburgh, read a paper entitled "The Psychoneuroses: How Shall We Look on Them Today?"

Dr. Edward E. Mayer, Pittsburgh, read a paper on "The Medicolegal Problems of the Traumatic Neuroses."

These three papers were discussed by Drs. H. T. Patrick, Chicago; D. S. Booth, St. Louis; Alfred Gordon, Philadelphia; A. W. Ives, Detroit; D. I. Wolfstein, Cincinnati; Tom A. Williams, Washington, D. C.; A. L. Skoog, Kansas City, Mo.; C. R. Woodbury, Clifton Springs, N. Y.; C. Woodson, Cincinnati; Bernard Sachs, New York; Theodore Diller, Pittsburgh, and E. E. Mayer, Pittsburgh.

Dr. Alfred Gordon, Philadelphia, read a paper on "Psychoses Other than Paretic Dementia in Syphilitic Individuals." Discussed by Drs. E. E. Mayer, Pittsburgh;

C. Woodson, Cincinnati; C. R. Ball, St. Paul, and Alfred Gordon, Philadelphia.

THURSDAY, JUNE 7—MORNING

Dr. Leo M. Crafts, Minneapolis, read a paper on "The Early Recognition of Multiple Sclerosis, with Report of Twelve Cases." Discussed by Drs. A. L. Skoog, Kansas City; E. E. Mayer, Pittsburgh; C. R. Ball, St. Paul; D. I. Wolfstein, Cincinnati; G. A. Moleen, Denver; Bernard Sachs, New York; F. R. Starkey, Detroit; Hayes Woods, Canton, China; E. D. Fisher, New York, and L. M. Crafts, Minneapolis.

Dr. George Wilson, Philadelphia, read a paper on "Progressive Muscular Atrophy: Charcot-Marie-Tooth Type." Discussed by Drs. Bernard Sachs, New York; W. A. Jones, Minneapolis, and Peter Bassoe, Chicago.

Dr. Simon P. Goodhart, New York, read a paper on "Metabolism of Muscular Dystrophy." Discussed by Drs. Janney, New York, and Leo M. Crafts, Minneapolis.

Dr. Edward D. Fisher, New York, read a paper on "Report of a Case of Syringomyelia with Operation: The Difference Between It and Amyotrophic Lateral Sclerosis." Discussed by Drs. M. Neustaedter, New York; Isador Abrahamson, New York, and E. D. Fisher, New York.

Dr. Nathaniel S. Yawger, Philadelphia, read a paper on "Familial Head Nystagmus in Four Generations, Associated with Ocular Nystagmus." Discussed by Dr. Isador Abrahamson, New York.

THURSDAY, JUNE 7—AFTERNOON

The following officers were elected: chairman, Dr. Charles Eugene Riggs, St. Paul; vice chairman, Dr. Charles W. Hitchcock, Detroit; delegate, G. A. Moleen, Denver; alternate, C. R. Ball, St. Paul.

Dr. Andrew L. Skoog, Kansas City, Mo., read a paper on "Cerebrospinal Fluid Pressure." Discussed by Drs. William A. Leszynsky, New York, and Andrew L. Skoog, Kansas City, Mo.

Dr. George W. Hall, Chicago, read a paper on "Organic Changes in the Central Nervous System, Due to Probable Focal Infections." Discussed by Dr. H. T. Patrick, Chicago; Munro, North Carolina, and George W. Hall, Chicago.

Dr. Israel Strauss, New York, read a paper on "Sciatica and Its Treatment." Discussed by Drs. William Leszynsky, New York; C. R. Ball, St. Paul; H. T. Pershing, Denver; Tom Williams, Washington, D. C.; D. I. Wolfstein, Cincinnati; H. T. Patrick, Chicago, and Israel Strauss, New York.

Drs. Isador Abrahamson and Hyman Climenko, New York, presented a paper on "Pituitary Disease: Study of One Hundred Cases." Discussed by Drs. Walter Timme, New York; D. I. Wolfstein, Cincinnati, and Isador Abrahamson, New York.

Drs. Marcus Neustaedter and E. Banzhaf, New York, presented a paper on "The Antipoliomyelitis Horse Serum." No discussion.

Dr. Howell T. Pershing, Denver, read a paper on "Persistent Treatment of Epilepsy." Discussed by Drs. L. P. Clark, New York; W. J. Dawson, Eldridge, Calif.; W. H. Kidder, Oswego, N. Y.; N. Pashayan, Schnectady, N. Y.; Leo M. Crafts, Minneapolis; E. D. Fisher, New York, and Howell T. Pershing, Denver.

The following resolution was passed:

The members of the Section on Nervous and Mental Diseases wish to express themselves as strongly opposed to any curtailment of the official time which has heretofore been allotted for the work of the section.

It is believed that this section, by reason of the scope and diversity of subjects represented, is second only in importance to the Section on the Practice of Medicine and the Section on Surgery. It includes not only the large field of nervous diseases and psychiatry, but also the special developments of neuropathy, psychopathology and neurologic surgery. It is also concerned with many essential problems, such as mental hygiene and mental defectives, criminal psychology and other subjects of great economic importance.

Furthermore, we would emphasize the fact that there is never any dearth of material for presentation at the meetings of this section; indeed, it is frequently necessary because of the limitations of the program to refuse meritorious papers.

If, however, for editorial reasons it should be deemed advisable to select only certain papers from the program for publication in THE JOURNAL, the members of this section would acquiesce very cordially in any such revision.

If the time heretofore allotted to the Section on Nervous and Mental Diseases should be curtailed, in spite of the earnest protest of its members, it would then become necessary to form an additional section in order to meet the requirements of this important field.

We believe that such a division would be unfortunate and that all subjects relative to the nervous system should receive consideration under the one head. [Not transmitted to House of Delegates.]

FRIDAY, JUNE 8—MORNING

A joint meeting was held with the Section on Diseases of Children and the Section on Orthopedic Surgery. For the proceedings, see the minutes of the Section on Orthopedic Surgery.

SECTION ON DERMATOLOGY

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order at 9:15 a. m. by the chairman, Dr. Henry R. Varney, Detroit.

Dr. Henry R. Varney, Detroit, read the chairman's address, entitled "The Hospital Opportunities and Responsibilities for the Syphilitic."

The following papers were read as a symposium on "The Economic Importance and Teaching of Syphilis":

Dr. John A. Fordyce, New York: "The Teaching of Syphilis."

Dr. C. Morton Smith, Boston: "The Teaching of Syphilis."

Dr. Walter J. Heimann, New York: "The Teaching of Syphilis."

Dr. Henry H. Hazen, Washington, D. C., read an abstract prepared by Major Mathew A. Reasoner of points which were to have been covered in the promised joint paper by Major Henry J. Nichols, Fort Bliss, Texas, and Major Mathew A. Reasoner, Washington, D. C., entitled "The Economic Importance of Syphilis."

These three papers and the abstract were discussed by Drs. Harry G. Irvine, Minneapolis; Augustus Ravogli, Cincinnati; Frank Edward Simpson, Chicago; Thomas W. Murrell, Richmond, Va.; Jay F. Schamberg, Philadelphia; Harold N. Cole, Cleveland; James Herbert Mitchell, Chicago; Isadore Rosen, New York; Franklin W. Cregor, Indianapolis; John H. Stokes, Rochester, Minn.; Boleslaw Lapowski, New York; John A. Fordyce, New York; C. Morton Smith, Boston, and Walter J. Heimann, New York.

Drs. Jay Frank Schamberg, John A. Kolmer and George W. Raiziss, Philadelphia, presented a paper on "A Study of the Manner in Which Mercury Is Absorbed When Administered by Inunction." Discussed by Drs. Boleslaw Lapowski, New York; William A. Pusey, Chicago, and Jay Frank Schamberg, Philadelphia.

Dr. Henry H. Hazen, Washington, D. C., made an explanatory statement in relation to steps to abrogate the United States patents on salvarsan. Dr. Jay Frank Schamberg, Philadelphia, explained action taken by the United States government in 1862 with reference to enemy patents. On motion the subject was passed for consideration at the afternoon session.

The chairman appointed the following Nominating Committee: Drs. F. G. Harris, Chicago; George M. MacKee, New York, and Howard Morrow, San Francisco.

WEDNESDAY, JUNE 6—AFTERNOON

The following officers were elected: chairman, Dr. Henry H. Hazen, Washington, D. C.; vice chairman, Dr. Ernest Dwight Chipman, San Francisco; secretary, Dr. Walter J. Heimann, New York.

The question of the abrogation of the United States patent on salvarsan, laid over during the forenoon, was discussed by Drs. C. Augustus Simpson, Washington, D. C.; Henry H. Hazen, Washington, D. C.; Sigmund Pollitzer, New York, and William A. Pusey, Chicago. On motion of Dr. C. Augustus Simpson (amended by Dr. William A. Pusey) the following resolution was passed:

Resolved, That it is the sense of the Section on Dermatology of The American Medical Association, which is representative of the American medical profession in the treatment of syphilis, that the United States patents on salvarsan be abrogated. (Not transmitted to House of Delegates.)

The following papers were read as a symposium on "Neoplasms":

Dr. J. Frank Fraser, New York: "Mycosis Fungoides: A Study of Seven Cases."

Dr. Harold N. Cole, Cleveland: "The Skin Changes in Hodgkin's Disease."

Dr. Fred Wise, New York: "Lymphadenosis Cutis Universalis, Associated with Generalized Erythrodermia and Atrophy of the Skin."

These three papers were discussed by Drs. Henry H. Hazen, Washington, D. C.; Adam Kemble, Washington, D. C.; Sigmund Pollitzer, New York, and Walter J. Heimann, New York.

Dr. Samuel E. Sweitzer, Minneapolis, read a paper on "An Analysis of Forty-One Cases of Skin Cancer." Discussed by Drs. Fred Wise, New York; Everett S. Lain, Oklahoma City; Walter J. Heimann, New York; Shepherd; J. C. Bateson, Scranton, Pa.; F. G. Harris, Chicago; Harold N. Cole, Cleveland; L. B. Mount, Albany, N. Y.; James M. King, Nashville, Tenn.; Franklin W. Cregor, Indinapolis; Henry H. Hazen, Washington, D. C., and Compton, Washington, D. C.

Drs. Joseph Zeisler and Erwin Paul Zeisler, Chicago, presented a paper on "Primary Nonpigmented Sarcoma of the Skin." Discussed by Dr. George M. MacKee, New York.

Dr. Augustus Ravogli, Cincinnati, read a paper on "Clinical Considerations on Epidermolysis Bullosa." Discussed by Drs. Harold N. Cole, Cleveland; Shepherd; William A. Pusey, Chicago; Frank E. Simpson, Chicago, and Augustus Ravogli, Cincinnati.

THURSDAY, JUNE 7—FORENOON

The supplemental report of the Nominating Committee was presented, and Dr. Sigmund Pollitzer, New York, was elected delegate and Dr. John A. Fordyce, New York, alternate.

Dr. Howard Morrow, San Francisco, read a paper on "The Treatment of Impetigo Contagiosa." Discussed by Drs. John E. Lane, New Haven, Conn.; W. C. Brownson, Asheville, N. C.; McConnell, New York; Samuel E. Sweitzer, Minneapolis; Everett S. Lain, Oklahoma City, and Harold N. Cole, Cleveland.

Dr. George Manghill Olson, Minneapolis, read a paper on "Argyria Localis Due to Organic Silver Preparations." Discussed by Drs. William A. Pusey, Chicago, and William B. Trimble, New York.

Dr. C. Augustus Simpson, Washington, D. C., read a paper on "Primrose Dermatitis: Its Relationship to Anaphylaxis." Discussed by Dr. Philip Kilroy, Springfield, Mass.; Walter J. Heimann, New York, and William A. Pusey, Chicago.

Dr. John E. Lane, New Haven, Conn., read a paper on "Perleche." Discussed by Drs. Harold N. Cole, Cleveland; William A. Pusey, Chicago; Philip Kilroy, Springfield, Mass.; George Manghill Oleson, Minneapolis, and W. C. Brownson, Asheville, N. C.

On motion of Dr. F. G. Harris, Chicago, the following resolution was adopted unanimously by rising vote:

Resolved, That a vote of thanks be given to the local clinical committee expressing our appreciation of their excellent clinic and their other cordial hospitalities.

On behalf of the local clinical committee, Dr. Walter J. Heimann made graceful acknowledgment, in the absence, as he said, of Dr. Howard Fox.

The newly elected chairman and secretary were inducted into office, and after their brief speeches of acceptance, the section adjourned.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order at 9:25 by the chairman, Dr. Otto P. Geier, Cincinnati.

In the absence of Dr. A. M. Harvey, Chicago, secretary, the chairman under authority conferred by motion, duly passed, appointed Dr. D. B. Lowe, Akron, Ohio, temporary secretary.

Dr. Otto P. Geier read the chairman's address, entitled "Adequate Medical Service of the Future." Discussed by Mr. Lee K. Frankel, New York, and Dr. Joseph Goldberger, Washington, D. C.

Dr. Henry M. Bracken, Minneapolis, read and moved the adoption of the following resolutions:

WHEREAS, Preventive medicine is of growing importance;

WHEREAS, The Section on Preventive Medicine and Public Health of the American Medical Association brings men who are interested more especially in public health work to its meetings, and

WHEREAS, The treatment of special subjects relating to preventive medicine requires concentration as to time; therefore, be it

Resolved, That the Section on Preventive Medicine and Public Health, through its representatives in the House of Delegates, hereby requests that its work at the annual sessions of the American Medical Association be extended to six units, and that it be permitted to hold its meetings each day until the work is completed. (See minutes, House of Delegates.)

Dr. W. S. Rankin, Raleigh, N. C., seconded the motion; Dr. William C. Rucker, Washington, D. C., offered an amendment that a committee of three be appointed to present the resolutions before the House of Delegates; the resolutions with the proposed amendment were favorably discussed by Drs. S. S. Goldwater, New York; Haven Emerson, New York, and Otto P. Geier, Cincinnati, and adopted; whereupon the chairman appointed as such committee Drs. Bracken, Rankin and Rucker.

Dr. W. S. Rankin, Raleigh, N. C., read a paper on "The New Public Health." Discussed by Drs. Henry M. Bracken, Minneapolis; William C. Rucker, Washington, D. C., and Arthur T. McCormack, Bowling Green, Ky.

Dr. David L. Edsall, Boston, read a paper on "The Diagnostic Clinic as a Factor in Higher Standards of Medical Practice." Discussed by Drs. Otto P. Geier, Cincinnati; Roger S. Morris, Cincinnati; Robert Pollock, San Diego, Calif., and Mr. S. I. Dublin, New York.

The paper of Dr. Sidney M. McCurdy, Youngstown, Ohio, on "The Industrial Dispensary as a Contribution to Public Health" was read by Dr. William C. Rucker, Washington, D. C. Discussed by Dr. George M. Kober, Washington, D. C.

Dr. John Newell Hurty, Indianapolis, read a paper on "The All-Day School Dispensary in the Prevention of Disease." Discussed by Drs. Taliaferro Clark, Washington, D. C.; J. C. Palmer, Syracuse, N. Y.; Herman N. Bundesen, Chicago; John Newell Hurty, Indianapolis, and Otto P. Geier, Cincinnati.

WEDNESDAY, JUNE 6—AFTERNOON

The meeting was called to order at about 2:15 by the chairman, Dr. Otto P. Geier, Cincinnati.

The chairman appointed Drs. Henry M. Bracken, Minneapolis; C. E. Ford, New York, and B. S. Warren, Washington, D. C., a nominating committee, to report on Thursday.

Prof. Irving Fisher, New Haven, Conn., delivered an address on "The Need for Compulsory Health Insurance." Discussed by Drs. Herbert J. Cronin, Cambridge, Mass., and E. F. Cody, New Bedford, Mass.

Mr. Frederick L. Hoffman, Newark, N. J., read a paper on "Facts and Fallacies of Compulsory Sickness Insurance." Discussed by Drs. Eden V. Delphey, New York; Aaron Grover Baldwin, East Orange, N. J.; L. W. Zwisohn, New York, and George W. Everson, Brooklyn.

The paper of Mr. M. W. Alexander, West Lynn, Mass., on "The Industrial Aspect" was read by Dr. C. D. Shelby, Toledo, Ohio. Discussed by Dr. Henry W. Berg, New York.

These three papers were then discussed by Drs. Gordon A. Bates, Toronto, Canada, and William S. Gottheil, New York, the latter moving the adoption of the following resolution:

Resolved, That after full discussion and careful consideration of the subject, the Section on Preventive Medicine and Public Health of the American Medical Association hereby instructs its delegate to the House of Delegates of the American Medical Association to oppose the scheme for compulsory health insurance in every way possible.

Seconded. Discussed by Drs. L. I. Harris, New York; Otto P. Geier, Cincinnati; Henry M. Bracken, Minneapolis. A motion by Dr. Otto P. Geier, Cincinnati, to amend by addi-

tion of the words "We protest against the ill considered action of the House of Delegates in approving the health insurance bill at this time, and that they be asked to reconsider their action, and postpone action until further study," seconded by Dr. Eden V. Delphey, New York, and discussed by Drs. Edward L. Spitzer, New York; B. S. Warren, Washington, D. C.; Henry W. Berg, New York; Henry M. Bracken, Minneapolis and others, was lost; whereupon the original motion and the general subject were discussed by Drs. John P. Davin and L. I. Harris, New York; M. L. Harris, Chicago; Henry W. Berg, New York; G. W. Schereschewsky, Pittsburgh; Eden V. Delphey, New York; Edward L. Spitzer, New York; B. S. Warren, Washington, D. C., and W. S. Rankin, Raleigh, N. C. A motion to table was lost by a vote of 20 ayes to 24 noes, and the original motion on the resolution as read was adopted.

THURSDAY, JUNE 7—MORNING

The meeting was called to order at 9:35 by the chairman, Dr. Otto P. Geier, Cincinnati.

Dr. Franklin H. Martin, Chicago, read a paper on "Preparations for Public Health During War." Discussed by Col. H. J. Goodwin, British Army; Drs. Otto P. Geier, Cincinnati; William C. Rucker, Washington, D. C.; John T. Nagle, New York; S. W. Welch, Montgomery, Ala.; H. C. Coe, New York, and Herman N. Bundesen, Chicago.

Dr. W. Irving Clark, Jr., Worcester, Mass., read a paper on "The Protection of the Health of the Worker in War."

The following officers were elected: chairman, Dr. W. S. Rankin, Raleigh, N. C.; vice chairman, Dr. Haven Emerson, New York; secretary (for three years), Dr. Don B. Lowe, Akron, Ohio; delegate, Dr. Otto P. Geier, Cincinnati; alternate, Dr. C. St. Clair Drake, Springfield, Ill.; Executive Committee, Drs. Otto P. Geier, Cincinnati; William C. Rucker, Washington, D. C., and C. Hampson Jones, Baltimore.

Dr. H. C. Coe, New York, read a paper on "The Medical Student as a Medicomilitary Cadet."

Dr. W. S. Rankin, Raleigh, N. C., offered the following resolution:

WHEREAS, The protection of the national health is a matter of paramount importance, particularly at the present time; and

WHEREAS, To accomplish this it is necessary that there be a close communication of all health agencies of the nation, the states and the municipalities; therefore, be it

Resolved, That the Section on Preventive Medicine and Public Health urges the House of Delegates to memorialize Congress, to the end that Senate Joint Resolution No. 63 be speedily enacted into law. (See minutes, House of Delegates.)

Seconded and adopted.

The paper by Dr. H. C. Coe was discussed by Drs. David L. Edsall, Boston, and Francis E. Fronczak, Buffalo.

The paper by Dr. W. Irving Clark, Jr., was discussed by Drs. John R. Williams, Rochester, N. Y.; David L. Edsall, Boston; T. R. Crowder, Chicago; G. W. Schereschewsky, Pittsburgh; Oscar F. Dowling, New Orleans; Herbert J. Cronin, Cambridge, Mass.; R. W. Corwin, Pueblo, Colo; W. Irving Clark, Jr., Worcester, Mass., and Otto P. Geier, Cincinnati.

THURSDAY, JUNE 7—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. Otto P. Geier, Cincinnati.

Dr. W. W. Peter, Shanghai, China, read a paper on "Some Aspects of the Public Health in China." Discussed by Drs. F. J. Tooker, China and New York; Rowland G. Freeman, New York; Haven Emerson, New York; N. W. Brown, Nanking, China, and W. W. Peter, Shanghai, China.

Dr. D. B. Armstrong, Framingham, Mass., read a paper on "Community Health and Tuberculosis Demonstration." Discussed by Drs. S. Adolphus Knopf, New York; D. B. Armstrong, Framingham, Mass.; Morris Hirschberg, New York, and Haven Emerson, New York.

Dr. A. F. Hess, New York, read a paper on "Prophylactic Therapy of Rickets in a Negro Community." Discussed by Drs. Haven Emerson, New York; J. Sobel, New York, and A. F. Hess, New York.

Dr. Haven Emerson, New York, moved the adoption of the following resolution:

Having heard the report of the beginnings of a public health education movement in China initiated by the National Medical Association, the China Medical Missionary Association and the Young Men's Christian Association, be it

Resolved, By the Section on Preventive Medicine and Public Health that this section express its sympathetic interest in the joint activities of these bodies and a hope that their work will stimulate the Chinese people to the task of conserving their national health. [Not transmitted to House of Delegates.]

Seconded and carried.

Dr. R. W. Corwin, Pueblo, Colo., read a paper on "Health: Preparedness in Time of Peace or When in Health." No discussion.

Dr. J. H. Mason Knox, Baltimore, read a paper on "The Place of Infant Welfare in an Institution of Hygiene." Discussed by Drs. William Welch, Baltimore; William T. Chapin, New York; Rowland G. Freeman, New York; A. F. Hess, New York, and J. H. Mason Knox, Baltimore.

SECTION ON GENITO-URINARY DISEASES

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order by the vice chairman, Dr. Carl L. Wheeler, Lexington, Ky., at 9:30.

Drs. Frederick W. Robbins and Frank C. Seabury, Detroit, presented a paper on the "Treatment of Chancroids." Discussed by Drs. Noah E. Aronstam, Detroit; Herman L. Kretschmer, Chicago; Charles W. Bethune, Buffalo; B. S. Barringer, New York; J. L. Boogher, St. Louis; G. G. Smith, Boston; Irwin E. Colgin, Waco, Texas, and Frederick W. Robbins, Detroit.

Dr. Anton G. Rytina, Baltimore, read a paper on "Clinical Consideration of Verumontanum Diseases Based on Histopathology." Discussed by Drs. C. M. Harpster, Toledo; J. B. Cross, Buffalo; O. S. Lowsley, New York; Leo Buerger, New York; Theodore Baker, Pittsburgh; R. H. Herbst, Chicago, and Anton G. Rytina, Baltimore.

Dr. Eugene Fuller, New York, read a paper on "External Urethrotomy and Seminal Vesiculotomy Combined in a Single Operative Procedure." Discussed by Drs. E. O. Smith, Cincinnati; R. H. Gibbons, New York, and Eugene Fuller, New York.

Dr. Edward G. Ballenger, Atlanta, Ga., showed moving pictures of various genito-urinary operations and procedures.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. George G. Smith, Boston, read a paper on "Bladder Disturbances Due to Nerve Lesions." Discussed by Drs. W. C. Quinby, Boston; Bransford Lewis, St. Louis; John T. Geraghty, Baltimore; J. L. Boogher, St. Louis; Martin Krotoszyner, San Francisco; W. F. Braasch, Rochester, Minn.; Edward L. Keyes, Jr., New York; Charles W. Bethune, Buffalo; Winfield Ayres, New York, and George C. Smith, Boston.

Dr. Bransford Lewis, St. Louis, read a paper on "Vesical Diverticula: Operation in Two Cases, with Remarks on Technic."

Dr. John T. Geraghty, Baltimore, read a paper on "A Study of the Results of Treatment of Various Types of Bladder Tumors."

Dr. Benjamin S. Barringer, New York, read a paper on "Radium Treatment of Bladder and Prostatic Carcinoma."

These three papers were discussed by Drs. Edward L. Keyes, Jr., New York; W. F. Braasch, Rochester, Minn.; G. G. Smith, Boston; Leo Buerger, New York; Martin Krotoszyner, San Francisco; W. C. Quinby, Boston; Bransford Lewis, St. Louis; John T. Geraghty, Baltimore, and B. S. Barringer, New York.

THURSDAY, JUNE 7—MORNING

The secretary read the resolution adopted by the House of Delegates in regard to the number of units for each section. He said he did not think, from his experience while secretary,

that three units, with a maximum of eighteen papers, would be sufficient, and he felt that there should be at least four units.

Dr. H. A. Fowler, Washington, D. C., offered the following resolution:

Believing that the action recently taken by the House of Delegates whereby the number of units of the program of the Section on Genito-Urinary Diseases has been reduced to three is insufficient for the needs of the section, the members of the section emphatically protest against such action, and request that the minimum number of units be not less than four.

The resolution was adopted.

The following nominating committee was appointed: Dr. Herman L. Kretschmer, Chicago, chairman; Dr. G. G. Smith, Boston, and Dr. H. G. Bugbee, New York.

Dr. Harry A. Fowler, Washington, D. C., read a paper on "Syphilis of the Bladder." Discussed by Drs. Martin Krotoszyner, San Francisco; G. G. Smith, Boston; Charles J. Watterston, Birmingham, Ala., and Harry A. Fowler, Washington, D. C.

The following papers were read as a symposium on "Roentgenographic and Clinical Diagnosis of Lithiasis in the Urinary Tract":

Dr. Eugene W. Caldwell, New York: "Review of a Series of Roentgenographic Examinations of the Urinary Tract."

Dr. Leon T. Lewald, New York: "The Differential Diagnosis of Lesions of the Urinary Tract from Those of the Gastro-Intestinal Tract, with Special Reference to Concretions in the Appendix."

Dr. Edward L. Young, Jr., Boston: "The Clinical Diagnosis of Lithiasis of the Urinary Tract."

Dr. Henry G. Bugbee, New York: "Clinical Study of Lithiasis Based on a Series of One Hundred and Ninety-Eight Cases."

These four papers were discussed by Drs. Henry K. Pancoast, Philadelphia; W. F. Braasch, Rochester, Minn.; H. L. Kretschmer, Chicago; Abraham Hyman, New York; James W. Hunter, Norfolk, Va.; H. A. Fowler, Washington, D. C.; G. G. Smith, Boston; A. M. Wose, Syracuse, N. Y.; V. D. Lespinasse, Chicago; B. S. Barringer, New York; J. E. Burns, Baltimore; A. J. Crowell, Charlotte, N. C.; C. M. Harpster, Toledo, and Edward L. Young, Boston.

The following officers were elected: chairman, Dr. Edward L. Keyes, Jr., New York; vice chairman, Dr. Martin Krotoszyner, San Francisco; secretary, Dr. W. F. Braasch, Rochester, Minn.; delegate, Dr. E. O. Smith, Cincinnati; alternate, Dr. Oliver Lyons, Denver.

THURSDAY, JUNE 7—AFTERNOON

Dr. Martin Krotoszyner, San Francisco, read a paper on "The Intravenous Phlorizin Test."

Drs. Benjamin A. Thomas and Joseph C. Birdsall, Philadelphia, presented a paper on "Comparative Results of a Number of Functional Kidney Tests on a Series of Patients."

These two papers were discussed by Drs. Robert H. Greene, New York; B. S. Barringer, New York; Abraham Hyman, New York; W. F. Braasch, Rochester, Minn.; A. G. Rytina, Baltimore; H. L. Kretschmer, Chicago; George W. Stark, Syracuse, N. Y.; John T. Geraghty, Baltimore, Martin Krotoszyner, San Francisco, and Benjamin A. Thomas, Philadelphia.

Dr. Herman L. Kretschmer, Chicago, read a paper on "The Value of Making a Routine Leukocyte Count on the Urine in Infections of the Higher Urinary Tract." Discussed by Drs. Martin Krotoszyner, San Francisco; W. C. Quinby, Boston, and George A. Wyeth, New York.

Dr. Abraham Hyman, New York, read a paper on "Surgical Diseases of the Urinary Tract in Children." Discussed by Drs. Leo Buerger, New York; H. L. Kretschmer, Chicago; Martin Krotoszyner, San Francisco; C. G. Bandler, New York, and Abraham Hyman, New York.

Dr. Charles E. Barnett, Fort Wayne, Ind., read a paper on "Polycystic Kidney." Discussed by Drs. Robert C. Bryan, Richmond, Va.; A. J. Crowell, Charlotte, N. C.; A. G. Rytina, Baltimore; B. A. Thomas, Philadelphia; O. S. Lowsley, New York; Martin Krotoszyner, San Francisco; John H. Cunningham, Jr., Boston; Herman L. Kretschmer, Chicago, and Charles E. Barnett, Fort Wayne, Ind.

SECTION ON ORTHOPEDIC SURGERY

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order by the chairman, Dr. Edwin W. Ryerson, Chicago, at 9:30 a. m. Dr. Ryerson read the chairman's address entitled, "The Care of Cripples as a Problem for Each Individual State." No discussion.

Dr. Wallace Blanchard, Chicago, read a paper on "Treated and Untreated Osteochondritis of the Hip." Discussed by Drs. John Joseph Nutt, New York; Percy W. Roberts, New York; Frederick J. Gaenslen, Milwaukee, Wis.; Samuel C. Baldwin, Salt Lake City; James W. Sever, Boston; Emil S. Geist, Minneapolis, and Wallace Blanchard, Chicago.

Dr. John Joseph Nutt, New York, read a paper on "Neurotization of Paralyzed Muscle: A Clinical and Laboratory Study," with a lantern demonstration by Dr. Frank J. Fraser, New York. Discussed by Drs. Arthur Steindler, Iowa City, Iowa; Walter Truslow, Brooklyn; Carl H. Bucholz, Boston; Henry Keller, New York; James W. Sever, Boston; Reginald H. Sayre, New York; H. W. Frauenthal, New York; W. C. Campbell, Memphis, Tenn., and John Joseph Nutt, New York.

Dr. Carl H. Bucholz, Boston, read a paper on "The Lame and Stiff Shoulder." Discussed by Drs. Walter Truslow, Brooklyn; Walter M. Brickner, New York; Wallace Blanchard, Chicago; Melvin S. Henderson, Rochester Minn.; E. D. Oppenheimer, New York; R. O. Meisenbach, Buffalo, and Carl H. Bucholz, Boston.

Dr. Henry B. Thomas, Chicago, read a paper on "Arthritis and Foreign Protein." Discussed by Drs. Walter G. Stern, Cleveland; R. O. Meisenbach, Buffalo, and Henry B. Thomas, Chicago.

Dr. Horace R. Allen, Indianapolis, read a paper on "Fractures." Discussed by Drs. Robert E. Farr, Minneapolis; J. D. Griffith, Kansas City; Edwin W. Ryerson, Chicago; Joseph E. Root, Hartford, Conn.; John Ridlon, Chicago; Albert H. Freiberg, Cincinnati; Henry Keller, New York; Roland Hammond, Providence, R. I.; A. A. Crane, Waterbury, Conn.; Eugene A. McCarthy, Fall River, Mass.; Samuel C. Baldwin, Salt Lake City; Melvin S. Henderson, Rochester, Minn.; J. D. Griffith, Kansas City, Mo.; R. O. Meisenbach, Buffalo, and Horace R. Allen, Indianapolis.

WEDNESDAY, JUNE 6—AFTERNOON

The following papers were presented as a symposium on "Poliomyelitis":

Dr. Charles Ogilvy, New York: "Study of a Group of One Hundred and Ten Cases of Poliomyelitis, from the Acute Attack to the Present Time."

Dr. E. D. Ebright, Coney Island, N. Y.: "The Orthopedic Treatment of Acute and Convalescent Poliomyelitis."

Dr. Samuel W. Boorstein, New York: "The Treatment of Anterior Poliomyelitis at Fordham Hospital."

These three papers were discussed by Drs. Charlton Wallace, New York; Walter Truslow, Brooklyn; Henry B. Thomas, Chicago; Willis C. Campbell, Memphis, Tenn.; J. D. Griffith, Kansas City, Mo.; Walter G. Stern, Cleveland; J. H. Eugene Rosamond, Memphis, Tenn.; Peter Bassoe, Chicago; Charles Ogilvy, New York; E. D. Ebright, Coney Island, N. Y., and Samuel W. Boorstein, New York.

Dr. Russell A. Hibbs, New York, read a paper on "The Treatment of Spinal Deformities Caused by Infantile Paralysis." Discussed by Drs. Emil S. Geist, Minneapolis; Fred J. Fassett, Seattle; John Ridlon, Chicago; Horace R. Allen, Indianapolis; Albert H. Freiberg, Cincinnati; E. D. Ebright, Coney Island, N. Y.; James W. Sever, Boston; Walter Truslow, Brooklyn, and Russell A. Hibbs, New York.

Dr. Michael Hoke, Atlanta, Ga., read a paper on "The Correction of Skeletal Defects of the Lower Extremities Resulting from Poliomyelitis," with lantern demonstration

and moving pictures. Discussed by Drs. Charles LeRoy Lowman, Los Angeles; J. D. Griffith, Kansas City, Mo.; Walter Truslow, Brooklyn; Russell A. Hibbs, New York, and Michael Hoke, Atlanta, Ga.

With the consent of the section, the chairman appointed Dr. Charlton Wallace, New York, to act as vice chairman in the place of Dr. Robert B. Osgood, who was absent in Europe; and Drs. Charlton Wallace and Charles G. Stern, Cleveland, in the places on the Executive Committee made vacant by the absence of Drs. Nathaniel Allison, St. Louis, and Leonard W. Ely, San Francisco.

THURSDAY, JUNE 7—MORNING

Dr. Frank E. Peckman, Providence, R. I., read a paper on "The Treatment of Scoliosis." Discussed by Drs. Albert H. Freiberg, Cincinnati; John Ridlon, Chicago; Royal Whitman, New York; E. H. Arnold, New Haven, Conn.; Virgil P. Gibney, New York; Frank E. Peckham, Providence, R. I., and James W. Sever, Boston.

Robert Jones of England was nominated for recommendation to be elected Honorary Member of the American Medical Association.

Dr. Royal Whitman, New York, read a paper on "Operative Orthopedics." Discussed by Drs. Samuel Kleinberg, New York; Edwin W. Ryerson, Chicago; Melvin S. Henderson, Rochester, Minn.; Henry Keller, New York; Royal Whitman, New York, and Albert H. Freiberg, Cincinnati.

Drs. Robert B. Osgood and Edward C. Bull, Boston, presented a paper on "The Operative Treatment of Tuberculosis of the Knee Joint in Adults." Discussed by Drs. M. S. Henderson, Rochester, Minn.; John Ridlon, Chicago; Mark H. Rogers, Boston; James A. O'Reilly, St. Louis; Henry Keller, New York; Arthur Steindler, Iowa City, Iowa; E. H. Arnold, New Haven; F. J. Gaenslen, Milwaukee, Wis.; Edwin W. Ryerson, Chicago; John Ridlon, Chicago; John Dunlop, Washington, and Edward C. Bull, Boston.

THURSDAY, JUNE 7—AFTERNOON

The following officers were elected: chairman, Dr. Albert H. Freiberg, Cincinnati; vice chairman, Dr. Fred. J. Fassett, Seattle; secretary, Dr. Henry B. Thomas, Chicago; delegate, Dr. John Ridlon, Chicago; alternate, Dr. J. D. Griffith, Kansas City, Mo.

Report of the Tuberculosis Committee was called for. In the absence of the chairman, Dr. Leonard W. Ely, San Francisco, one of the members of the committee, Dr. James A. O'Reilly, St. Louis, made a motion that the committee be abolished. The motion was seconded and carried.

Dr. Russell A. Hibbs, New York, in the absence of the chairman of the Preparedness Committee, Dr. Joel E. Goldthwait, Boston, read the report of the committee, together with an attached list of equipment. On motion, duly seconded, the report was accepted as read.

A motion was made that the same committee, already appointed from the American Orthopedic Association, be made also a committee of the Section on Orthopedic Surgery of the American Medical Association, for the purpose of taking up with the government and its various officials the details of orthopedic preparedness. Of this committee Dr. Joel E. Goldthwait, Boston, was chairman. The motion was seconded and carried. (Not transmitted to the House of Delegates).

Dr. R. O. Meisenbach, Buffalo, offered the following resolution:

WHEREAS, The Canadian government has experienced considerable difficulty in regard to the feet of its soldiers:

Resolved, That it is the sense of the Section on Orthopedic Surgery of the American Medical Association that the attention of the proper authorities should be called to the fact, and the possibility of avoiding this difficulty by appointing an orthopedic surgeon on the exemption boards that are now being formed.

This resolution was adopted. (Not transmitted to the House of Delegates).

Dr. Henry Ling Taylor, New York, made a motion that the attention of the Preparedness Committee be called to the fact that the soldiers, particularly in training camps, do not have long enough hours of sleep, in consideration of the strenuous work that they are called on to perform. The motion was seconded and carried. (Not transmitted to the House of Delegates).

Drs. William Sharpe and Benjamin P. Farrell, New York, presented a paper entitled "A Further Report of the First Sixty-Five Cases of Cranial Decompression for Selected Cases of Spastic Paralysis Due to Hemorrhage." Discussed by Drs. Fred J. Fassett, Seattle, and William Sharpe, New York.

Dr. James W. Sever, Boston, read a paper on "The Results of the Treatment of Obstetric Paralysis." Discussed by Drs. John Dunlop, Washington; A. S. Taylor, New York; J. A. Nutter, Montreal; John J. Nutt, New York, and James W. Sever, Boston.

Dr. Walter M. Brickner, New York, read a paper on "Pain in the Arm: Subdeltoid (Subacromial) Bursitis," illustrated by slides and moving pictures. Discussed by Drs. Eli Moschowitz, New York (lantern slides); Arthur H. Bogart, Brooklyn; Fred J. Fassett, Seattle; James A. O'Reilly, St. Louis; Milton G. Wasch, Brooklyn; H. O. Wolff, New York; John Dunlop, Washington, D. C., and Walter M. Brickner, New York.

Dr. Frederick J. Gaenslen, Milwaukee, Wis., read a paper on "Simplified Technic of Laminectomy." Discussed by Dr. Edwin W. Ryerson, Chicago.

Drs. Henry Ling Taylor and George Barrie, New York, presented a paper on "Juxta-Articular Bone Lesions of the Hip." Discussed by Drs. E. D. Oppenheimer, New York; Henry Ling Taylor, New York, and George Barrie, New York.

FRIDAY, JUNE 8—MORNING

A joint meeting was held with the Section on Nervous and Mental Diseases and the Section on Diseases of Children.

The meeting was called to order at 9:10 by Dr. Bernard Sachs, chairman of the Section on Nervous and Mental Diseases.

Dr. T. C. McCleave, Oakland, Calif., made a motion that the secretary of his section be requested to inform the secretary of the American Medical Association that it was the wish of the sections that hereafter no important action affecting the sections be taken by the Association without first sending notice to the sections that such action was contemplated. The motion was seconded and carried.

The following papers were read as a symposium on "Infantile Paralysis":

Dr. George Draper, New York: "Early Diagnosis and Specific Treatment of Poliomyelitis."

Dr. Charles Herrman, New York: "Contagiousness of Acute Poliomyelitis."

Dr. Haven Emerson of the Department of Health of New York City was then asked to speak about the epidemic of the disease there last summer, after which the following papers of the symposium were read:

Dr. Frederick Tilney, New York: "Recent Additions to Our Knowledge of Poliomyelitis."

Dr. LaSalle Archambault, Albany, N. Y.: "The Hematogenous Invasion of the Cerebrospinal Axis in Poliomyelitis."

Dr. Henry L. K. Shaw, Albany, N. Y.: "Results of the Present Epidemic of Infantile Paralysis."

Dr. Robert W. Lovett, Boston: "Treatment of Infantile Paralysis, with Especial Reference to a Study of the New York State Cases."

These papers were discussed by Drs. Herman Schwartz, New York; Reginald H. Sayre, New York; Horace Greeley, Brooklyn; William C. Hager, Brooklyn; Henry Keller, New York; Alexander Spingarn, Brooklyn; George Draper, New York; Charles Herrman, New York, and LaSalle Archambault, Albany.

After the adjournment of the joint meeting, the Section on Diseases of Children remained.

Dr. T. C. McCleave, Oakland, Calif., made a motion that a vote of thanks be given by the Section on Diseases of Children to Drs. Charles G. Kerley, New York; A. Jacobi, New York, and H. M. McClanahan, Omaha. The motion was seconded, and was carried unanimously.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order by the chairman, Dr. Dwight H. Murray, Syracuse, N. Y.

Dr. Murray read the chairman's address, entitled "Our Section: Retrospect and Prospect." No discussion.

A motion was entertained to place this address before the executive committee for action.

Dr. Martin E. Rehfuss, Philadelphia, read a paper on "Achylia." Discussed by Drs. Charles D. Aaron, Detroit; Albert F. R. Andresen, Brooklyn; Max Einhorn, New York; Louis Lefrak, New York; Seymour Basch, New York; J. W. Weinstein, New York; J. O. Polefski, Newark; Harris Weinstein, New York; B. B. Vincent Lyon, Philadelphia, and Martin E. Rehfuss, Philadelphia.

The following papers were read as a symposium on "Chronic Diarrheas Due to Enterocolonic Conditions":

Dr. Samuel G. Gant, New York: "Chronic Diarrheas Due to Enterocolonic Conditions: The Surgical Point of View."

Dr. Julius Friedenwald, Baltimore: "Chronic Diarrheas Due to Enterocolonic Conditions: The Medical Point of View."

Dr. John L. Jelks, Memphis, Tenn.: "Rectal and Sigmoidal Conditions in Chronic Diarrhea."

These three papers were discussed by Drs. Charles D. Spivak, Denver; Thomas Chittenden Hill, Boston; Nathan Rosewater, Cleveland; Frank Clark Yeomans, New York; J. Rawson Pennington, Chicago; Alfred J. Zobel, San Francisco; Horace W. Soper, St. Louis; Harris Weinstein, New York; J. W. Weinstein, New York; Dwight H. Murray, Syracuse; Samuel G. Gant, New York; Julius Friedenwald, Baltimore, and John L. Jelks, Memphis, Tenn.

Dr. Jerome M. Lynch, New York, read a paper on "Statistical and Clinical Review of Four Hundred and Fifty Cases of Cancer of the Rectum and Colon." Discussed by Drs. George B. Evans, Dayton, Ohio; Frank Clark Yeomans, New York; William M. Beach, Pittsburgh; Dwight H. Murray, Syracuse; John L. Jelks, Memphis, Tenn.; Louis J. Hirschman, Detroit, and Jerome M. Lynch, New York.

WEDNESDAY, JUNE 6—AFTERNOON

The following officers were elected: chairman, Dr. Anthony Bassler, New York; vice chairman, Dr. Alois B. Graham, Indianapolis; secretary, Dr. Horace W. Soper, St. Louis; delegate, Dr. Louis J. Hirschman, Detroit; alternate, Dr. J. C. Johnson, Hamilton, Ala.

Drs. G. Reese Satterlee and W. W. Eldredge, Jr., New York, presented a paper on "The Symptomatology of the Nervous System in Chronic Intestinal Toxemia." Discussed by Drs. S. Russell Verbrycke, Jr., Washington, D. C.; Fenton B. Turck, New York; E. E. Smith, Columbus, Ohio; Nathan Rosewater, Cleveland, and G. Reese Satterlee, New York.

Dr. Lewis Gregory Cole, New York, read a paper on "Mucosal Type of Gastric and Duodenal Ulcer." Discussed by Drs. William H. Stewart, New York; Dudley D. Roberts, Brooklyn; I. H. Levy, Syracuse, N. Y.; H. K. Dunham, Cincinnati; Fenton B. Turck, New York; Charles D. Spivak, Denver; J. W. Weinstein, New York, and Lewis Gregory Cole, New York.

Dr. Emmett H. Terrell, Richmond, Va., read a paper on "A Further Report of the Use of Quinin and Urea in the Treatment of Hemorrhoids." Discussed by Drs. Collier F. Martin, Philadelphia; A. E. Chace, New York; D. C. McKenney, Buffalo; George B. Evans, Dayton, Ohio, and Emmett H. Terrell, Richmond, Va.

Dr. J. Rawson Pennington, Chicago, read a paper on "Anal and Rectal Fistula." Discussed by Drs. William M. Beach, Pittsburgh; A. E. Chace, New York; R. W. Jackson, Fall River, Mass.; Fenton B. Turck, New York; B. Gruskin, Chicago; Dwight H. Murray, Syracuse; Louis J. Hirschmann, Detroit; T. C. Martin, Washington, D. C., and J. Rawson Pennington, Chicago.

THURSDAY, JUNE 7—MORNING

The following resolution was offered by the Executive Committee:

The Executive Committee of the Section on Gastro-Enterology and Proctology advise the appointment of a committee of five to confer with and offer its services to the National Council of Defense for the purpose of standardizing the dietetics of the Army.

The resolution was entertained as a motion duly made, seconded and carried, and the chairman, Dr. Dwight H. Murray, Syracuse, N. Y., appointed the following members to act on this committee of five: chairman, Dr. Martin E. Rehfuss, Philadelphia; and Drs. William G. Morgan, Washington, D. C.; Dudley D. Roberts, Brooklyn; Dwight H. Murray, Syracuse, N. Y., and William M. Beach, Pittsburgh. (Not transmitted to the House of Delegates).

Dr. William G. Morgan, Washington, D. C., read a paper on "Gastric Conditions in Spastic Constipation." Discussed by Drs. I. Harris Levy, Syracuse, N. Y.; Louis M. Gompertz, New Haven, Conn.; Max Einhorn, New York; Dwight H. Murray, Syracuse, N. Y.; Charles D. Spivak, Denver; Nathan Rosewater, Cleveland; David Bercinsky, New Haven, Conn, and William G. Morgan, Washington, D. C.

The following papers were read as a symposium on "Chronic Constipation":

Dr. Horace W. Soper, St. Louis: "Autointoxication in Chronic Constipation."

Dr. Granville S. Hanes, Louisville, Ky.: "Enterocolonic Conditions in Chronic Constipation."

Dr. Alois B. Graham, Indianapolis: "Rectal Conditions in Chronic Constipation."

These three papers were discussed by Drs. Henry Illoway, New York; Dudley D. Roberts, Brooklyn; Walter A. Bastedo, New York; Joseph C. Bloodgood, Baltimore; Emmett H. Terrell, Richmond, Va.; Jerome Myers, New York; Martin E. Rehfuss, Philadelphia; W. L. Chapman, Providence, R. I.; Milton J. Lichty, Cleveland; Thomas Charles Martin, Washington, D. C.; J. A. Ruben, Pittsburgh, and G. Reese Satterlee, New York.

Dr. John W. Draper, New York, read a paper on "Dynamic and Adynamic Intestinal Obstruction." Discussed by Drs. Joseph C. Bloodgood, Baltimore; John Bryant, Boston; Jerome M. Lynch, New York, and John W. Draper, New York.

SECTION ON PRACTICE OF MEDICINE

WEDNESDAY, JUNE 6—MORNING

The chairman, Dr. Henry A. Christian, called the meeting to order.

Dr. Charles W. McClure, 697 Huntington Avenue, Boston, served as secretary in the absence of the secretary, Dr. James S. McLester, who was operated on Saturday (four days ago) for acute appendicitis. The section instructed the chairman to wire Dr. McLester the sympathy of the section and their hope for his rapid convalescence.

The chairman, Dr. Henry A. Christian, Boston, read a paper on "Visceral Disturbances in Patients with Cutaneous Lesions of the Erythema Group." No discussion.

Dr. Frank Smithies, Chicago, read a paper on "Clinical Manifestations of Gallbladder Disease: A Study of 1,000 Cases," and illustrated the paper with lantern slides. Discussed by Drs. David Riesman, Philadelphia; G. M. McCaskey, Indianapolis; P. S. Roy, Washington, D. C.; Edward F. Wells, Chicago, and Frank Smithies, Chicago.

Dr. Douglas Vanderhoof, Richmond, Va., read a paper on "Dilated Duodenum, with Especial Reference to Chronic Duodenal Obstruction in Visceroptosis." Discussed by Drs. Lewis A. Conner, New York; George R. Satterlee, New York; F. B. Turck, New York; W. L. Bierring, Des Moines, Iowa; F. W. White, Boston, and Douglas Vanderhoof, Richmond, Va.

The chairman appointed Drs. W. S. Thayer, Baltimore; W. L. Bierring, Des Moines, Iowa; W. F. Cheney, San Francisco, and G. M. McCaskey, Indianapolis, to serve as a nominating committee.

Dr. Alfred Stengel, Philadelphia, read a paper on "Clinical Features of Prolonged and Severe Secondary Anemia."

Dr. L. V. Barker, Baltimore, read a paper on "Methods and Results in the Treatment of Pernicious Anemia." These two

papers were discussed together by Drs. Henry A. Christian, Boston; N. E. Brill, New York; G. R. Minot, Boston; C. H. McCaskey, Indianapolis; Frank Smithies, Chicago; Edward Lindeman, New York; E. L. Tuohy, Duluth, Minn.; A. Castelli, New York; Alfred Stengel, Philadelphia, and L. F. Barker, Baltimore.

Dr. K. M. Lynch, Charleston, S. C., read a paper on "Clinical and Experimental Study of a Lymphoid Splenomegaly With and Without Leukocythemia," and illustrated the paper with lantern slides. Discussed by Drs. Alfred Stengel, Philadelphia, and K. M. Lynch, Charleston, S. C.

WEDNESDAY, JUNE 6—AFTERNOON

Dr. F. M. Pottenger, Monrovia, Calif., read a paper on "The Vegetative Nervous System in Pulmonary Tuberculosis." Discussed by Drs. Walter Timmee, New York; Frank Smithies, Chicago; S. Solis-Cohen, Philadelphia; M. Fishberg, New York; Ernest Zueblin, Cincinnati, and F. M. Pottenger, Monrovia, Calif.

Dr. Joseph H. Pratt, Boston, read a paper on "The Value of Prolonged Rest in the Treatment of Pulmonary Tuberculosis." Discussed by Drs. W. L. Dunn, Asheville, N. C.; S. A. Knopf, New York; Ernest Zueblin, Cincinnati; F. M. Pottenger, Monrovia, Calif; M. Fishberg, New York, and Joseph H. Pratt, Boston.

Dr. Rufus I. Cole, New York, read a paper on "Report of Studies Concerning Acute Lobar Pneumonia." Discussed by Drs. Lawrence Litchfield, Pittsburgh; David Bovaird, New York; S. J. Meltzer, New York, and Rufus I. Cole, New York.

Dr. I. Chandler Walker, Boston, read a paper on "Studies on the Cause and Treatment of Bronchial Asthma." Discussed by Drs. W. T. Longcope, New York; M. J. Gottlieb, New York; M. I. Knapp, New York; Ernest Zueblin, Cincinnati; L. F. Bishop, New York; G. N. Jack, Buffalo; S. Solis-Cohen, Philadelphia, and I. Chandler Walker, Philadelphia.

Dr. Theodore B. Barringer, Jr., New York, read a paper on "Studies of the Heart's Functional Capacity," and illustrated his paper with lantern slides. Discussed by Drs. T. Stuart Hart, New York; H. B. Williams, New York; W. P. St. Lawrence, New York, and T. B. Barringer, Jr., New York.

Dr. Stewart R. Roberts, Atlanta, Ga., read a paper on "A Study of Arterial Sounds," and illustrated the paper with charts. Discussed by Drs. A. E. Roussel, Philadelphia; R. A. Bate, Louisville, Ky., and Stewart R. Roberts, Atlanta, Ga.

Dr. Charles W. McClure, Boston, read a paper on "The Vital Capacity of the Lungs and Its Relation to the Clinical Conditions in Heart Disease," and illustrated the paper with lantern slides. Discussed by Drs. Joseph H. Pratt, Boston; T. B. Barringer, Jr., New York; R. G. Pierce, Cleveland, and Charles W. McClure, Boston.

Dr. Roger S. Morris, Cincinnati, read a paper on "The Percussion and Roentgen-Ray Findings After Injections of the Pericardium," and illustrated the paper by charts and lantern slides. Discussed by Drs. Charles S. Williamson, Chicago (with charts); Alfred Meyer, New York, and Roger S. Morris, Cincinnati.

Dr. James B. Herrick, Chicago, read a paper on "A Clinical Study of 200 Cases of Angina Pectoris." Discussed by Drs. S. Neuhoff, New York; S. R. Roberts, Atlanta, Ga.; James B. Herrick, Chicago, and Joseph H. Pratt, Boston.

Dr. Marcus A. Rothschild, New York, read a paper on "Electrocardiographic Changes Associated with Myocardial Involvement, with Special Reference to Prognosis," and illustrated with lantern slides. Discussed by Drs. W. G. McCallum, New York; H. B. Williams, New York; E. Liebmann, New York; James B. Herrick, Chicago, and M. A. Rothschild, New York.

THURSDAY, JUNE 7—AFTERNOON

The first order of business was the report of the committee to nominate officers. The committee reported as follows: chairman, Dr. Lawrence Litchfield, Pittsburgh; vice chairman, Dr. A. W. Hewlett, San Francisco; secretary, Dr. J. S. McLester, Birmingham, Ala.; delegate, Dr. W. J. Stone, Toledo, Ohio.

It was moved and seconded that the report of the nominating committee be acepted and the secretary be instructed to cast a ballot for the section. Seconded and carried.

Dr. Pottenger moved that the arrangement of section meetings remain as it is at the present time with a shortening of the program to twenty-five papers. Seconded and carried.

Dr. Elliott P. Joslin, Boston, read a paper on "The Blood Lipoids in Diabetes." Discussed by Drs. R. Geyelin, New York; F. M. Allen, New York, and Horace Gray, Boston.

Dr. Warren Coleman, New York, read a paper on "The Influence of the High Calory Diet on the Course of Typhoid Fever." Discussed by Drs. E. F. Du Bois, New York; D. D. Roberts, Brooklyn; C. H. Breitenbach, Dayton, Ohio; Max Einhorn, New York; E. P. Joslin, Boston; A. E. Roussel, Philadelphia; H. A. Christian, Boston, and Warren Coleman, New York.

Dr. B. B. Vincent Lyon, Philadelphia, read a paper on "Gastric Crises of Spinal Syphilis: A Clinical and Laboratory Study of Four Cases." Discussed by Drs. Joseph Sailer, Philadelphia; David Riesman, Philadelphia; W. H. Mercur, Pittsburgh; F. M. Pottenger, Monrovia, Calif.; G. M. Luden, Rochester, Minn., and B. B. Vincent Lyon, Philadelphia.

Dr. Frank Billings, Chicago, read a paper on "A Study of Chronic Arthritis," and illustrated his paper by lantern slides and charts. Discussed by Drs. E. C. Rosenow, Rochester, Minn.; J. J. Walsh, New York; H. A. Christian, Boston, and Frank Billings, Chicago.

Dr. Sydney R. Miller, Baltimore, read a paper on "Bence-Jones Proteinuria: The Frequency of Its Occurrence, the Criteria of Its Presence, and Its Possible Relationship to Nephritis with Hypertension." Discussed by Drs. H. G. Beck, Baltimore; H. A. Christian, Boston, and S. R. Miller, Baltimore.

Dr. Arthur F. Chace, New York, read a paper on "The Dietetic Treatment of Nephritis, Controlled by the Chemical Examination of the Blood," illustrated by lantern slides.

Dr. Franklin C. McLean, New York, read a paper on "Nephritis from the Standpoint of Urea Excretion," illustrated with lantern slides.

Dr. Albert A. Epstein, New York, read a paper on "Nature and Treatment of Chronic Parenchymatous Nephritis (Nephrosis)." These three papers were discussed by Drs. H. O. Mosenthal, Baltimore; E. P. Du Bois, New York; Victor C. Myers, New York; H. A. Christian, Boston; L. F. Bishop, New York; Nathan Rosewater, Cleveland, and Albert A. Epstein, New York.

The chairman: This brings the session to a close. To some of you my attitude in adhering strictly to the rule that the time allowed for discussion be limited may seem a little harsh, but I felt that it was a rule that should be adhered to and endeavored to treat all alike.

A rising vote of thanks was given to Dr. Christian for his services in acting as chairman of the section.

AWARDS IN THE SCIENTIFIC EXHIBIT

The following is a list of awards made in the Scientific Exhibit at the annual session of the association in New York last week:

GOLD MEDAL. Dr. B. S. Oppenheimer, Cardiographic Laboratory, Mt. Sinai Hospital, New York. Electrocardiographic exhibit, illustrating pathological physiology of the cardiac mechanism.

SILVER MEDAL. Dr. Victor Lespinasse, Chicago. An exhibit on obstructive sterility.

BRONZE MEDAL. Department of Obstetrics, Yale University, Medical School. An exhibit on placental pathology.

CERTIFICATES OF MERIT. 1. Dr. William L. Coplin, Philadelphia. A collection of hypoplastic kidneys.

2. Dr. Charles S. Williamson, Chicago. Casts of hearts and exudates from an experimental study of pericarditis with effusion.

3. Mayo Clinic, Rochester, Minn.

4. Dr. Alfred A. Strauss, Chicago. Charts and specimens illustrating (a) Pylorectomy by submucous fascial transplant method; (b) Reconstruction of the pylorus by fascial transplants after resection for ulcer.

5. Washington University, St. Louis. Exhibit on heredity, development of hypophysis, cleidocranial dysostosis.

6. Dr. John Shelton Horsley, Richmond, Va. Illustration of original surgical procedures.

Marriages

Harold Houston Jones, M.D., Winfield, Kan., to Miss Madeline Tinity of Kansas City, Mo., at St. Joseph, Mo., May 19.

Buford Mourse Colby, M.D., St. Joseph, Mo., to Miss Alice Malony of Kansas City, Mo., at St. Joseph, May 19.

Daniel Clark Wharton Smith, II, M.D., Baltimore, to Miss Edwina Caven Hensel of Haverford, Pa., June 2.

Andrew Jackson Warren, M.D., to Miss Margaret Lyle Spurgeon, both of Hillsboro, N. C., June 12.

Frank E. Hurrle, M.D., Little Rock, Ark., to Miss Mary V. Walker of Pine Bluff, Ark., April 17.

Joseph Earle Moore, M.D., to Miss Grace Douglas Barclay, both of Baltimore, May 24.

Herman Laurence Dowd, M.D., to Miss Alice Richard, both of New York, May 24.

Fred W. Buckley, M.D., to Miss Louise Sabin, both of Beatrice, Neb., May 23.

Deaths

Thomas Palmer Satterwhite, M.D., Louisville, Ky.; University of Louisville, 1857; aged 82; formerly a Fellow of the American Medical Association and fourth vice president in 1895-1896; one of the most widely known practitioners of Kentucky; from 1863 to 1869 demonstrator of anatomy in his alma mater; for many years surgeon to Sts. Mary and Elizabeth and the City hospitals, Louisville; for twelve years president of the board of commissioners of the Kentucky Central State Hospital, Lakeland; surgeon for the Big Four, Southern, and Chesapeake and Ohio systems; once president of the Association of Surgeons of the Southern Railway; physician and surgeon for the Louisville School of Reform for many years; the first to inaugurate a free dispensary in Louisville; died at his home, June 3, from cerebral hemorrhage.

Julius O. Schlotterbeck, Ann Arbor, Mich.; University of Michigan, Ph.C., 1888; B.S., 1891; University of Bern, Ph.D., 1896; Professor of Pharmacognosy, University of Michigan School of Pharmacy and Dean of the School; formerly a member of the Council on Pharmacy and Chemistry of the American Medical Association (1905-8); a member of many scientific societies, and the author of many papers on plant chemistry and related subjects; died at Ann Arbor, Mich., May 31, after a long illness from liver disease.

Luther Anson Todd, M.D., St. Joseph, Mo.; College of Physicians and Surgeons in the city of New York, 1900; aged 42; a Fellow of the American Medical Association, professor of anatomy in the Ensworth-Central Medical College, St. Joseph; chief surgeon to the St. Joseph and Grand Island Railroad and to the St. Joseph Street Railway Co.; formerly president of the board of health of St. Joseph; died in an interurban car near Camden Point, Mo., May 22; from cerebral hemorrhage.

Harry Mayham Keator, M.D., Roxbury, N. Y.; College of Physicians and Surgeons in the City of New York, 1902; aged 43; a Fellow of the American Medical Association and a member of the New York Academy of Medicine; clinical assistant at the Presbyterian Hospital and Vanderbilt Clinic, New York, and demonstrator of physiology in his alma mater; who has been ill with tuberculosis, is reported to have committed suicide, at the home of his sister, in Oneonta, N. Y.

William Charles Walser, M.D., Livingston, Staten Island, N. Y.; College of Physicians and Surgeons in the City of New York, 1873; aged 66; a member of the Medical Society of the State of New York; for many years chief surgeon to the S. R. Smith Infirmary, now the Staten Island Hospital, and consultant to the Nursery and Child's Hospital, Fort Richmond; once president of the Staten Island Medical Society; died at his home, May 21.

Henry Pinckney Frost, M.D., Boston; University of Maryland, Baltimore, 1889; aged 48; a Fellow of the American Medical Association, and a member of the American Neurological Association and American Medico-Psychological Association; superintendent of the Boston State Hospital, Mattavan; formerly assistant superintendent at the Willard and Buffalo (N. Y.) state hospitals; died in the Boston State Hospital, May 23, from pneumonia.

Foster Thayer, M.D., Riverhead, N.Y.; Bellevue Hospital Medical School, 1866; aged 74; acting assistant surgeon, U. S. Navy, during the Civil War; assistant surgeon in the army of the Argentine Republic in 1867 and 1868; medical director of the Mutual Benefit Association of Suffolk County; for nearly half a century a practitioner of Riverhead; died at his home, May 18.

David Arthur Jay, M.D., Lemars, Iowa; College of Physicians and Surgeons, Keokuk, 1890; aged 48; formerly a Fellow of the American Medical Association; for sixteen years president of the Eldon Big Four Fair Association; a member of the Association of Military Surgeons of the United States; died at the family home, near Agency, Iowa, May 12.

Edmund Janes Palmer, M.D., New York; College of Physicians and Surgeons in the City of New York, 1881; aged 60; a Fellow of the American Medical Association, and a member of the New York Society for Medical Jurisprudence; for thirty years chief physician to St. Luke's Home, New York; died at his home, May 28.

Isaac Winter Heysinger, M.D., Philadelphia; Jefferson Medical College, 1867; aged 75; a veteran of the Civil War; a member of the commission which supervised the consruction of the Rittersville, Pa., State Hospital; well known as a writer, artist, linguist, and musician, died at his home, May 18, from heart disease.

Emanuel Hochheimer, M.D., New York; New York University, New York; aged 62; a Fellow of the American Medical Association; visiting physician to the Montefiore Home and Yonkers Home for the Aged and Infirm; physician to the New York City Asylum for the Insane; died at his home, May 29.

Simon John Tunstall, M.D., Brighouse Station, near Vancouver, B. C.; McGill University, Montreal, 1875; aged 64; once president of the Canadian Medical Association, and one of the founders of the Vancouver Medical Association; died at his home, March 15, from hemorrhage of the stomach.

Junius D. Young, M.D., Stockton, Calif.; University of California, San Francisco, 1881; aged 59; a member of the Medical Society of the State of California; chief of the medical staff of the Stockton State Hospital for the Insane for more than thirty years; died at his home, May 23.

David Geiger Garland, M.D., Carney's Point, N. J.; University of Louisville, Ky., 1913; aged 27; formerly of Huntington, W. Va.; but for the last fifteen months assistant chief surgeon for E. I. du Pont de Nemours & Co.; died at White Haven, Pa., May 13, from tuberculosis.

Everal Caleb Haviland, M.D., Keene, N. H.; Albany, N. Y., Medical College, 1904; aged 39; a Fellow of the American Medical Association; for six years assistant physician to the Brattleboro, Vt., Retreat, and for two years city physician of Keene; died at his home, May 27.

Thomas J. Kane, M.D., Paterson, N. J.; Long Island College Hospital, Brooklyn, 1872; aged 71; a member of the Medical Society of New Jersey; died in St. Joseph's Hospital, Paterson, May 26, three days after an operation for the relief of intestinal disease.

Cornelius O'Connor, M.D., Kansas City, Mo.; Kentucky School of Medicine, Louisville, 1885; aged 64; a Fellow of the American Medical Association; for many years a member of the staff of St. Joseph Hospital, Kansas City; died in that institution, May 31.

Robert Home, Jr., M.D., Toronto, Ont.; University of Toronto, Ont., 1913; aged 26; captain, Royal Army Medical Corps, who went to Europe with the first Canadian expeditionary force, in August, 1914; is reported to have been killed in battle.

James Roy Freeland, M.D., Pittsburgh; University of Pennsylvania, Philadelphia, 1904; aged 33; a Fellow of the American Medical Association, and a specialist in obstetrics and gynecology; died at his home in East End, Pittsburgh, May 28.

William James Squire, M.D., Buffalo; University of Buffalo, N. Y., 1893; aged 57; died at his home, April 28.

Frank Holland, M.D., Atlanta, Ga.; Atlanta Medical College, 1879; aged 61; died at his home, May 7.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

SOME MISBRANDED "COUGH REMEDIES"*

Barker's Remedy for Catarrh, Coughs, Colds and Rheumatism.—Henry W. Barker, who traded as the H. W. Barker Medical Co., Sparta, Wis., manufactured "H. W. Barker's Remedy for Catarrh, Coughs, Colds and Rheumatism." This nostrum was sold under claims that would lead the public to believe that it was effective as a remedy for, and for the prevention of, "catarrh," *la grippe*, hay fever, croup, whooping cough, tonsillitis and all catarrhal affections of the throat, lungs, stomach and mucous membrane and that it would also prevent consumption and diseases of the lungs. The federal chemists reported that the product was essentially sugar and water with a small amount of cubebs, potassium iodid and creosote, having a wintergreen flavor and being colored pink. The claims made for this mixture were declared to be false and fraudulent and applied recklessly and wantonly. Barker entered a plea of *nolo contendere* and was fined $100.—[*Notice of Judgment No. 4401.*]

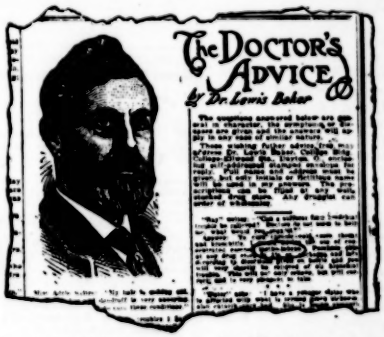
Mathieu's Cough Syrup.—Charles Favreau and Frank Collette, trading as Favreau & Collette, Marlboro, Mass., sold "Mathieu's Cough Syrup," which has formerly been called "Syrup of Tar and Cod-Liver Oil." The stuff admittedly contained 5¼ per cent. of alcohol and 2½ minims of chloroform to the fluid ounce. The label declared that the product contained "the active principles of tar and cod-liver oil." The federal chemists reported that very little, if any, tar was present and cod-liver oil was absent. There was a minute quantity of creosote and some menthol in the stuff. Of the 53.77 per cent. solids present, more than 50 per cent. was sugar. It was sold under the claim that it was an effective remedy for scarlet fever, croup and diphtheria and a cure for croup. These claims were declared to be false and fraudulent and made knowingly, recklessly and wantonly. Collette entered a plea of *nolo contendere* and was fined $25. The case against Favreau was *nolle prossed*.—[*Notice of Judgment No. 4405.*]

Forrest's Juniper Tar.—This preparation was made and sold by the J. Harrison Whitehurst Co. ("J. H. Whitehurst, M. D. Pharm. D.") which was a trade name under which Anna Lavinia Whitehurst did business in Baltimore. The preparation admittedly contained 22 per cent. alcohol and the government chemists found over 55 per cent. of petroleum and oil of tar. The product was declared misbranded because it was claimed to be a safe, reliable and speedy remedy for all kinds of throat and lung diseases, for arresting and curing catarrh, influenza and consumption in its early stages as well as whooping cough, inflammatory rheumatism and piles. It was also claimed to be a cure for consumption and obstinate coughs. These claims were characterized by government officials as false and fraudulent and applied knowingly, recklessly and wantonly. Anna Lavinia Whitehurst entered a plea of *nolo contendere* and was fined $15.—[*Notice of Judgment No. 4417.*]

Terraline.—The Hillside Chemical Co. of Newburgh, N. Y., was charged with misbranding under the Food and Drugs Act for shipping in interstate commerce quantities of "Terraline Plain" and "Terraline with Heroin." "Terraline Plain" was found to be simply liquid petrolatum while "Terraline with Heroin" was a similar drug carrying heroin in solution. "Terraline Plain" was declared misbranded because of the claims that it was easily digested and of value as nutriment and, indeed, was preferable to cod liver oil when, in fact, it was not digestible, was not preferable to cod liver oil and contained no nutritive value whatever. Furthermore, the claims made for "Terraline Plain" and "Terraline with Heroin" that they were effective remedies for consumption, asthma, la grippe, croup and all diseases of the throat and lungs were declared wantonly false and fraudulent. The Hillside Chemical Company pleaded guilty and was fined $25.—[*Notice of Judgment No. 4503.*]

Classe's Cough Syrup.—This preparation was sold by William P. Diggs of St. Louis, who did business under the trade name W. P. Diggs & Co. The stuff, which had an odor of tar, contained about 60 per cent. of sugar, 7 per cent. alcohol, 3 per cent. glycerin with tolu and wild cherry present. The claims that it was an effective and beneficial remedy in consumption, asthma, whooping cough, croup and all inflammation of the lungs were declared wantonly and recklessly false and fraudulent. Diggs pleaded guilty and was fined $10 and costs.—[*Notice of Judgment No. 4489.*]

Essence Mentho-Laxene.—This is one of the numerous nostrums put out by the Blackburn Products Co., Dayton, Ohio, which advertises by means of the "fake prescription" method. "*The Doctor's Advice* by Dr. Lewis Baker," a scheme for advertising which gives the impression that the advertisement is really a newspaper "health department," is one of the means by which "Mentho-Laxene" has been exploited. The



preparation, which according to the federal chemists contained 34 per cent. alcohol together with menthol, amonium salt, chlorid, sugar, drug extract and an unidentified alkaloid, was sold under the claim that it would prevent consumption and *la grippe* and was an effective remedy for croup and asthma. These claims were declared false and fraudulent and applied knowingly and in reckless and wanton disregard of their truth or falsity. The company pleaded guilty and was fined $50 and costs.—[*Notice of Judgment No. 4437.*]

Brown's Acacian Balsam.—The Kells Co., Newburgh, N. Y., sold a preparation called "Dr. O. Phelps Brown's Acacian Balsam." Government chemists reported that this product contained 11 per cent. of alcohol and over 16 grams of acacia to each 100 c.c. In addition, nitrate, licorice, meconic acid, tartrates, reducing sugar and sodium and potassium compounds were found present. It was sold under the claim that it was a remedy for consumption, asthma, all diseases of the lungs, diphtheria and heart complaints. These claims were declared recklessly and wantonly false and fraudulent. The company pleaded guilty and was fined $50.—[*Notice of Judgment No. 4444.*]

Sykes' Sure Cure for Catarrh.—Dr. Sykes' Sure Cure Co., Chicago, Ill., sold the "Dr. Sykes Sure Cure for Catarrh." According to the label, the stuff was originated by Dr. C. R. Sykes, who "took a course of medical studies and graduated as an M.D. in Bennett Medical College, Chicago, and the rest of his life was spent in successfully treating catarrh." The

* This material, with much additional, appears in the new edition of the pamphlet "Convictions," price fifteen cents.

government chemists reported the results of analyses of two samples, one shipped from Illinois to California and the other from Illinois to New York. The samples varied but contained essentially about 2 per cent. alcohol with potassium chlorate, ammonium chlorid, and small amounts of hydrastin and methyl salicylate. The claim that the stuff was a cure for consumption, catarrh and diabetes mellitus was declared false and fraudulent. The company pleaded guilty and was fined $100 and costs.—[*Notice of Judgment No. 4459.*]

Warner's White Wine of Tar Syrup.—The C. D. Warner Co. of Coldwater, Mich., manufactured and sold "Dr. Warner's White Wine of Tar Syrup," which contained opium and alcohol. The government officials declared that the preparation was misbranded, first, because the name was false and misleading in that it indicated that the stuff contained tar and a substantial amount of wine when, as a matter of fact, it contained no tar whatever and but an insignificant amount of wine. The government further declared that the claims that the preparation was an effective remedy for consumption and all diseases and affections of the throat and lungs were false and fraudulent and made knowingly, recklessly and wantonly. The company pleaded guilty and was fined $50.—[*Notice of Judgment No. 4422.*]

Rawleigh's Golden Cough Syrup and Rawleigh's Ru-Mex-Ol.—A Freeport, Ill., corporation, the W. T. Rawleigh Medical Co., manufactured both these products. The "Golden Cough Syrup" admittedly contained alcohol and chloroform. The government chemists reported that in addition to these substances there was menthol and guaiacol in small amounts and indications of horehound. It was sold under the claim that it would cure whooping cough and asthma, claims which the authorities declared were recklessly and wantonly false and fraudulent. The other product "Ru-Mex-Ol" admittedly contained 26½ per cent. alcohol; in other words, it was just one-half the strength of raw whiskey. The federal chemists found, in addition to the alcohol, some vegetable matter in which rhubarb was indicated. The preparation was sold as a "valuable remedy" for "scrofula" and "eczema" for always keeping the blood pure, for fortifying the system by purifying the blood and thus preventing tuberculosis. The government maintained that these claims were recklessly and wantonly false and fraudulent. The company pleaded guilty and was fined $100 and costs.—[*Notice of Judgment No. 4419.*]

Never Let a Cough "Hang on"
Golden Cough Syrup
Rawleigh's Cough Medicines Are Safe, Sure and Reliable
Rawleigh's RU-MEX-OL
Makes Pure, Rich, Red Blood

Gooch's Mexican Syrup of Wild Cherry, Tar, Etc.—This preparation, which contained morphin and alcohol, was manufactured by the Cincinnati Drug and Chemical Company, Cincinnati, Ohio. The government chemists reported that, in addition to the morphin and alcohol, there were 61.1 per cent. solids, of which more than 58 per cent. was sugar. Glycerin also was found as well as methyl salicylate and benzaldehyd used as flavoring. Tar and cherry extract were reported to be present in very small amounts. This mixture was sold as a "cure" for consumption and a remedy for croup, whooping cough and spitting of blood. The claims were declared false and fraudulent and applied knowingly, recklessly and wantonly. The company pleaded guilty and was fined $25 and costs.—[*Notice of Judgment No. 4425.*]

Correspondence

JUSTICE TO THE PHARMACIST

To the Editor:—The one outstanding feature of the present world-wide war, which differentiates it from all previous wars, is the recognition of the importance of the industrial resources of nations. Not only is the war of today a contest between military forces, but it is a contest between industrial forces. Every nation involved is mobilizing its industries—using the term in its broadest sense—and stimulating their growth and development to the highest plane of efficiency, realizing that, in the final analysis, victory will go to that nation or those nations which will hold out the longest—industrially, financially and militarily. It is a war of attrition. Such being the case, it is vital that the United States, having entered into the war, should mobilize its industries—which it is doing with the aid of the Council of National Defense—and do everything possible to strengthen the weak links of its industrial chain.

One of the most important industries of the war is the relief of human suffering and the saving of human life, and this is the special province of the medical profession, which has never failed to discharge its duty in the past and will not fail now. No one can question the loyalty of the American medical profession to the highest ideals of professional conduct or its patriotism.

The weakest link of the army is its system of pharmaceutic service. This is exceedingly unsatisfactory, because it is hopelessly antiquated. We have no pharmaceutic corps, pharmacists being compelled to enlist as privates without any provision for commissioned rank, as in the dental and veterinary corps. France, Germany, Japan and other nations have such corps, in charge of a pharmaceutic expert of high military standing. The head of the Pharmaceutic Corps in Germany is of the rank of colonel; in Japan of the rank of lieutenant-colonel, and in Italy and France of the rank of major-general.

The present system is detrimental to the efficiency of the army because it fails to recognize the importance of proper and sufficient pharmaceutic service and denies to the sick and wounded the best pharmaceutic service the nation can give. The present system is unfair to pharmacy and pharmacists. Pharmacy is a profession and the graduated pharmacists of today have had years of collegiate training and practical experience. To enlist professional men as privates is not only unjust to the men, but it is also unjust to the army, because it denies to the army the possibilities of service which such men could render. We hear a great deal these days about commercialism in modern pharmacy, but there has never been a time when American pharmacists, as a class, were being better trained for professional work than today. There are upwards of 100 colleges of pharmacy in the country and these are growing less in number—and stronger. The entrance requirements are being raised, the curriculums extended and everything possible is being done to uplift American pharmacy, professionally. One thousand five hundred pharmacists graduate this year and they are loyal to high professional ideals.

The present system is unfair to the medical corps because it denies to that body the assistance and support that a properly trained pharmaceutic corps could give. Pharmacists have been trained not only in pharmacy, but they have also had elementary training in some of the medical sciences, and could be made most useful "medical assistants" in the field, while in the hospitals they could be made purveyors and given charge of the medical supplies, as well as render pharmaceutical and chemical service in the dispensing of drugs and in the chemical and bacteriologic examination of food, water, milk, excrements, etc. In addition they could be developed into useful workers in Roentgen ray, anesthesia, bandaging and sanitation. The present war is more destructive in injuries and fatalities, both to privates and to physicians, than ever before. Before the war, our army required seven medical officers for each thousand combatants. Today

our army is requiring ten medical men for each thousand, while the British forces have increased their number to nineteen, and it is more than probable that when we get into action we shall have to adopt the British ratio. This means 19,000 physicians for each million of troops or 38,000 for 2 millions. Today, there are probably less than 5,000 medical men in commission or in the reserve corps. Hence, it is exceedingly important that the medical forces of the country be mobilized, and a properly trained pharmaceutic corps could be made of great usefulness to the medical corps as "assistants," both in the field and in hospitals.

Approximately there are 150,000 pharmacists in the United States from which an ample supply of skilled pharmacists could be drawn; but the conditions of pharmaceutic service in the army will have to be radically changed before they can do their best work. American pharmacy is a profession, no matter how much it may be tinctured in some directions with commercialism, and American pharmacists in general and the American Pharmaceutical Association in particular have been making serious and earnest endeavors to improve existing conditions.

Like the cry of Macedonia, we ask the great American medical profession to "come over and help us" in the upbuilding of American pharmacy, so that both the profession of medicine and the profession of pharmacy may be bettered. We ask, also, that the medical profession put its seal of approval on the movement to establish a pharmaceutic corps in the army and urge the War Department and the Congress to establish such a corps with proper military standing and responsibilities. American pharmacy is not seeking any special privilege, but it is asking for proper professional recognition in the army service to the end that it may have the opportunity to do its fullest and best work for the sick and the wounded.

JOSEPH W. ENGLAND, Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

PRESERVATION OF EGGS IN WATER GLASS

To the Editor:—Kindly help me in finding directions for preserving eggs which appeared in THE JOURNAL about two months back. It consisted in putting them in a solution of water glass, but I have forgotten the strength given. If you can refer me to the number in which it appeared, I shall be very much indebted.

F. E. BROWN, M.D., Baltimore.

ANSWER.—The following articles on this subject have appeared in THE JOURNAL:

Water Glass, Queries and Minor Notes, Aug. 29, 1914, p. 796.
Water Glass in the Preservation of Eggs, Queries and Minor Notes, Sept. 5, 1914, p. 883.
Blunt, K., and Wang, C. C.: Chinese Preserved Eggs—Pidan, *Jour. Biol. Chem.*, 1916, **28**, 125; abst. THE JOURNAL, Jan. 6, 1917, p. 66.
Pidan—An Oriental Food, editorial, Feb. 10, 1917, p. 468.

The following is an abstract of a method recently published by the New York State College of Agriculture at Cornell University:

Eggs should be preserved during March, April, May and June, when the production is greatest and the price is lowest. The commercial water glass solution may be obtained from any drug store, or the powder can be dissolved in a definite quantity of water, as stated in the directions on the package.

If the commercial water glass solution is used, mix 1½ quarts with 18 quarts of pure water; water that has been boiled is preferable. Stir the mixture until the ingredients are thoroughly mixed. A stone jar is the most suitable vessel for the mixture. Two 8-gallon jars are sufficient for 30 dozen eggs, with the amount of solution just prescribed. After the water glass is thoroughly mixed, pour it into the vessels to be used, being sure that the vessels are absolutely clean. Place the eggs in the water glass, see that those at the top are submerged under at least 2 inches of the liquid, and cover the jars in order to prevent evaporation. Put the jars in a cool place where they will be undisturbed during the year.

If there is any doubt as to the freshness of the eggs, candle them, or see whether they sink when placed in a dish of fresh water. If an egg sinks, it is reasonably fresh.

Do not preserve dirty eggs or eggs that have been washed. Washed eggs will not keep because the protective gelatinous coating has been removed by the washing; and dirty eggs will become tainted in flavor. If it is desired to boil eggs preserved in water glass, prick a small hole through the large end of the shell before placing them in the water. The pores of shell have been sealed by the water glass solution, and without the pinhole the expanding air within the shell would burst it.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, July 9. Chairman, Dr. S. W. Welch, Montgomery.
ALASKA: Juneau, July 3. Sec., Dr. H. C. DeVighne, Juneau.
ARIZONA: Phoenix, July 2-3. Sec., Dr. John W. Thomas, 306 Goodrich Bldg., Phoenix.
CALIFORNIA: San Francisco, July 10. Sec., Dr. Charles B. Pinkham, 529 Forum Bldg., Sacramento.
COLORADO: Denver, July 3. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.
CONNECTICUT: Regular: New Haven, July 10-11. Sec., Dr. Charles A. Tuttle, 196 York St., New Haven.
CONNECTICUT: Eclectic: New Haven, July 10. Chairman, Dr. John W. Fyfe, Saugatuck.
CONNECTICUT: Homeopathic: New Haven, July 10. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.
DELAWARE: Dover and Wilmington, June 19-21. Sec., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.
DISTRICT OF COLUMBIA: Washington, July 10. Sec., Dr. Edgar P. Copeland, The Rockingham, Washington.
FLORIDA, Regular: Palatka, June 19-20. Sec., Dr. E. W. Warren, Palatka.
INDIANA: Indianapolis, July 10-12. Sec., Dr. W. T. Gott, 84 State House, Indianapolis.
KANSAS: Topeka, June 19-21. Sec., Dr. H. A. Dykes, Lebanon.
KENTUCKY: Louisville, June 19-21. Sec., Dr. A. T. McCormack, Bowling Green.
MAINE: Augusta, July 5-6. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.
MARYLAND: Baltimore, June 19. Sec., Dr. J. McP. Scott, 137 W. Washington St., Hagerstown.
MASSACHUSETTS: Boston, July 10-12. Sec., Dr. Walter P. Bowers, Room 501, No. 1 Beacon St., Boston.
MISSISSIPPI: Jackson, June 19-20. Sec., Dr. W. S. Leathers, Oxford.
MISSOURI: St. Louis, June 18. Sec., Dr. George M. Jones, 206 Washington St., Jefferson City.
NEW HAMPSHIRE: Concord, June 25-26. Sec., Dr. W. T. Crosby, Beacon Bldg., Manchester.
NEW JERSEY: Trenton, June 19-20. Sec., Dr. Alexander MacAlister, 438 East State St., Trenton.
NEW MEXICO: Santa Fe, July 9. Sec., Dr. R. K. McClanahan, U. S. Naval Hospital, Las Animas, Colorado.
NEW YORK: Albany, Buffalo, New York and Syracuse, June 26-29. Sec., Dr. Willard J. Denno, Education Bldg., Albany.
NORTH CAROLINA: Raleigh, June 19. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.
NORTH DAKOTA: Grand Forks, July 3. Sec., Dr. George M. Williamson, Grand Forks.
OKLAHOMA: Oklahoma City, July 10-11. Sec., Dr. R. V. Smith, Tulsa.
PENNSYLVANIA: Philadelphia and Pittsburgh, July 10-12. Sec., Mr. Nathan C. Schaeffer, State Capitol, Harrisburg.
RHODE ISLAND: Providence, July 5. Sec., Dr. Gardner T. Swarts, 315 State House, Providence.
SOUTH DAKOTA: Deadwood, July 10. Sec., Dr. Park B. Jenkins, Waubay.
TEXAS: Austin, June 19-21. Sec., Dr. M. F. Bettencourt, Mart.
VERMONT: Burlington, July 10-12. Sec., Dr. W. Scott Nay, Underhill.
VIRGINIA: Richmond, June 19-22. Sec., Dr. J. W. Preston, 215 S. Jefferson St., Roanoke.
WASHINGTON: Seattle, July 3-5. Sec., Dr. C. N. Suttner, Walla Walla.
WEST VIRGINIA: Charleston, July 10. Sec., Dr. S. L. Jepson, Capitol Bldg., Charleston.
WISCONSIN: Milwaukee, June 26. Sec., Dr. J. M. Dodd, 220 E. 2nd St., Ashland.
WYOMING: Laramie, June 27-29. Sec., Dr. H. E. McCollum, Laramie.

PREPARATION OF MEDICAL MISSIONARIES*

At a conference held under the auspices of the Board of Missionary Preparation in New York, some time ago, on "The Preparation of Medical Missionaries for Service," the following was adopted:

MEDICAL PREPARATION

The following outline of the professional training of a medical missionary takes for granted a four-year course in a Class A medical school (American Medical Association classification). It demands seven years of training after graduation from the high school and points out the advantages of three years more.

* Fifth Annual Report of the Board of Missionary Preparation, p. 339.

1. PREMEDICAL EDUCATION: (*a*) A four-year high school course of at least fourteen units, including seven units of required work as follows:

English, two units.
Latin, Greek, or a modern foreign language, two units.
American history and civil government, one unit.
Algebra to quadratics, one unit.
Plane geometry, one unit.

The other seven units may be made up from any other secondary school subjects. A unit of manual training or of domestic science may be advisable.

(*b*) In addition to the high school course, a college course of at least two years, or its full equivalent, which shall include as a minimum courses of eight semester hours each in chemistry, physics, biology and French or German. The science courses should include laboratory work. In a two-year college course the time not occupied by the foregoing subjects should be spent on a selection from the following:

English language and literature.
Mathematics.
History.
Biblical history and literature.

(*c*) A third year in college is strongly recommended, based largely on the foregoing list. As optional subjects for the third year the following are suggested:

Sociology.
Psychology.
History and methods of education.

(*d*) If the age of the candidate does not prevent, the advantage of the full course of four years in college is distinctly recognized, because of the larger opportunity offered for general culture and for religious training. Some of the subjects for which this additional year would afford an opportunity are:

Economics.
History of religion.
Social and religious survey of the world.
Comparative religion.
Essentials of Christianity.

2. MEDICAL EDUCATION: A course of four years in a medical school of Class A. The regular curriculum should be followed, and no attempt made to specialize except through optional or elective courses. Whatever spare time or energy the student may have can be given to the inspection of thoroughly organized, finely equipped and well managed hospitals to gain ideals of efficiency, and to the study of health service organizations and of various forms of organized philanthropic service to become acquainted with standardized methods of sanitation and relief.

3. GRADUATE MEDICAL TRAINING: *Required.*—At least one year as intern in a good hospital.

Strongly Recommended.—(*a*) One year of postgraduate study in subjects which are important for medical missionary work. The more important subjects are:

Surgery.
Obstetrics.
Diseases of women and children.
Diseases of the eye, ear, nose and throat.
Tropical diseases.
Preventive medicine, hygiene, and sanitation.

(*b*) Keeping, as far as possible, in touch with hospital work, while learning the language, during the first year or so on the missionary field. Professional eagerness, however, should be strictly subordinated to language mastery, unless the doctor is to be related to an institution in which the study is wholly in English. The preliminary courses in phonetics and language acquisition, mentioned below, will tend to greatly reduce the time needed for such mastery.

4. SPECIAL PREPARATION FOR WOMEN MEDICAL MISSIONARIES: In view of the scope of the medical work of a large proportion of women physicians in the Orient, women medical missionaries should be especially trained in obstetrics and the diseases of women and children. Such training may be secured in some instances during the regular medical course, and in others by supplementary study and hospital experience.

5. LICENSE TO PRACTICE MEDICINE: Every appointment to medical missionary service should be conditioned on the passing of an examination by an examining board of some state or other authority. This is important both in the interests of the missionary's standing and as a protection to him in case he should be compelled to relinquish his work abroad and take up permanent practice in the home land.

6. LANGUAGE ACQUISITION: Since by the last year of training the medical missionary candidate is almost sure to know his destination, it will be worth while to attend if possible, during the year, a course of lectures on the science of language acquisition and on fundamental phonetics, each with relation to the language to be used in the field.

7. FURLOUGH STUDY: The medical missionary should plan to take postgraduate instruction in his specialty or in general medicine during his furlough periods, even though he has been given some opportunity for medical study and research while on the field. It is to be hoped that every board will realize the importance of this and provide both the opportunity and the necessary funds.

Book Notices

MEDICAL DISEASES OF THE WAR. By Arthur F. Hurst, M.A., M.D., F.R.C.P., Physician and Neurologist to Guy's Hospital. Cloth. Price, $1.75 net. Pp. 151. New York: Longmans, Green & Co., 1917.

Many books have been written about the surgical aspect of the war, but comparatively little has been published in regard to strictly medical subjects, though all military medical officers appreciate their extreme importance. Death and disablement on account of wounds are discounted beforehand, but many a campaign has been lost because of a lack of appreciation of the medical side. This book covers the principal diseases encountered, though it appears that almost too much space is taken up with a discussion of nervous disorders. This section, however, is extremely interesting, and includes a number of illuminating case reports. The author finds that most nervous disorders encountered are functional, and that treatment, in the main, has been successful. Hypnotic suggestion seems to have been most efficacious in this type of case. In discussing the dysenteries, he devotes space to symptomatology and diagnosis which could have been used to better advantage in giving more details in regard to prophylaxis. Excellent chapters on trench fever, paratyphoid fever and gas poisoning should interest our officers, who will shortly see these diseases in their European service. The author thoroughly considers epidemic jaundice and beriberi, but it is to be regretted that other camp diseases, such as typhoid fever and diarrhea, are not mentioned. As a whole, the book is well written and is most timely. Many errors will be avoided by our officers if such a volume is generally studied.

OURSELVES: A Personal and Family History Register for Preserving Records of a Private and Personal Nature for One Married Couple and Their Children. Also an Appendix Offering Remarks and Hints on the Subject of Development of Children—of Mind, Body, Character and Personality. By John Madison Taylor, A.B., M.D., Professor of Applied Therapeutics in the Medical Department of Temple University. Cloth. Price, $5 net. Philadelphia: F. A. Davis Company, 1917.

The author has arranged in convenient form a series of pages for keeping family records. The book includes an index to names, diagrams for listing ancestors, personal histories of health, blanks for baby records, charts for recording weight and height, blanks for clinical laboratory findings, anatomic diagrams, and pages for special happenings, photographs, handwriting, etc. The object of the book is to preserve material on heredity and health concerning the individual, the family and the race. When the book is completed, it is suggested that it be sent to the Eugenics Record Office, Department of Experimental Evolution, of the Carnegie Institution of Washington, to be there deposited for use in compilation at some future date. The ideal which prompted the author of this book seems worth while, and much valuable information will some day be available if a sufficient number of persons cooperate in the work.

SANITATION IN WAR. By Major P. S. Lelean, C.B., F.R.C.S., F.C.S., Assistant Professor of Hygiene, Royal Army Medical College. With an Introduction by Surgeon-General Sir Alfred Keogh, K.C.B., M.D., F.R.C.P. Second Edition. Cloth. Price, $2 net. Pp. 336, with 54 illustrations. Philadelphia: P. Blakiston's Son & Co., 1917.

This excellent little manual is by a man who is thoroughly familiar with his subject. It is to be regretted that it is in the form of lectures. This tends to detract from the value of a book, as the impression is given that the matter has not received careful editing. Furthermore, the chapters do not

follow in regular sequence. For instance, the chapter on the administration of the medical service is sandwiched in between a chapter on insects and one on field conservancy, and in the chapter on medical administration the author takes up such matters as the selection of camp sites and other sanitary details. In a chapter on sanitary innovations there is a complete description of those which are most important, with working drawings. The whole work is eminently practical, and though many of the details are different from the methods pursued in our army, no one on this side of the water who reads the book can fail to absorb a great deal of information about practical sanitary service.

POETRY AND THE DOCTORS. A Catalogue of Poetical Works Written by Physicians, with Biographical Notes and an Essay on the Poetry of Certain Ancient Practitioners of Medicine, Illustrated with Translations from the Latin and by Reproductions of the Title Pages of the Rarer Works. By Charles L. Dana, A.M., M.D., LL.D. Cloth. Price, $5. Pp. 83, with 21 illustrations. Woodstock, Vermont: The Elm Tree Press, 1916.

In this booklet the author presents a catalogue of poetical works written by physicians, short biographical notes of each physician, and an essay on the poetry of some ancient medical practitioners. The book is artistically prepared, and includes numerous reproductions of title pages of many rare books, as well as examples of the poetry of Italian, German and French physicians. The final statement in the essay on early physicians is a note of caution to the physician who feels poetically inclined:

> So it is to be hoped that if doctors ever have the divine fire in them they will not prevent its expression, always remembering that only the very best poetry is poetry, and that mediocrity is more a sin in poetry than in any other art.

As Horace says:

> "In some professions mediocrity and tolerable endowments may properly be allowed . . . but neither gods nor men give any indulgence to middling poets; for poetry designed by nature for improving our minds, if it comes short ever so little of the top, must sink to the bottom."

TEXT-BOOK OF OPHTHALMOLOGY. By Hofrat Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized Translation from the Twelfth German Edition by Alexander Duane, M.D., Surgeon Emeritus, Knapp Memorial Hospital, New York. Fifth Edition. Cloth. Price, $7. Pp. 1067, with 402 illustrations. Philadelphia: J. B. Lippincott Company, 1917.

As the translator, who has done his duty well, explains, the present edition is in several senses a new work. He has made a number of radical alterations in arrangement of the text of the fourth edition which have certainly made the new volume more serviceable as a book of reference. In this important sense the present work is the result of the joint labors of both Fuchs and Duane. As a reflex of the recent progress of ophthalmology, a number of pages have been added to the chapters on oculomuscular disturbances, glaucoma, retinal diseases, refraction and operations on the eye. Of the many actual additions to our knowledge of opthalmology, scattered throughout the book, may be mentioned discussions on ophthalmic therapy by means of tuberculin and other vaccines; the mapping of scotomas and the blind spot; squirrel plague and eel's blood conjunctivitis; color testing and the visual field; extragenital gonococcus infection; inclusion blennorrhea; retinitis stellata, and the etiology of iritis. We are sure that this very complete textbook will continue to be favorably received by the profession.

ORGANISM AND ENVIRONMENT AS ILLUSTRATED BY THE PHYSIOLOGY OF BREATHING. By John Scott Haldane, M.D., LL.D., F.R.S. Cloth. Price, $1.25. Pp. 138. New Haven: Yale University Press, 1917.

This is a concise and lucid statement of the facts concerned in the regulation of breathing, the reaction of the blood and the phenomena of acidosis, as now understood. Haldane has made important contributions to our knowledge of the regulation of respiration, as well as to the special and practical respiratory measures insuring safety under high and low atmospheric pressures. He is at the same time a biologic philosopher, and in the last chapter of the book he marshals the physiologic facts of respiration in defense of the so-called vitalistic school, to the tenets of which a number of prominent English scientists appear to subscribe.

Medicolegal

Procuring an Unlawful Abortion Involves an Assault

(State vs. Farnam (Ore.), 161 Pac. R. 417)

The Supreme Court of Oregon, in affirming a judgment of conviction of manslaughter, says that procuring an unlawful abortion on any woman always involves an assault in law, even when it is done with her consent and connivance, because no one can consent to an unlawful act. While as between the parties an unlawful act may sometimes be condoned, it is not within the power of any person to waive the violation of the laws of the country. And if procuring an unlawful abortion is an assault, the offense comes within those involuntary killings by misdirected violence which constitute manslaughter. At common law the producing of an unlawful abortion resulting in the death of the mother was murder by violence. The Oregon statute by making the offense manslaughter has not created a new crime, but has merely reduced the grade of an old offense by changing the punishment from death to imprisonment in the penitentiary. Again, the court says that it concludes from certain precedents that at common law the act of producing an abortion was always an assault, for the double reason that a woman was not deemed able to assent to an unlawful act against herself, and for the further reason that she was incapable of consenting to the murder of an unborn infant. And the court deduces the principle that procuring an unlawful abortion by any means is always in the eye of the law an assault, both on the woman operated on and on the unborn child, and that the one who, in producing such abortion, kills the mother stands in no different relation to the law from a person who, in an attempt to shoot A, shoots wild and kills B, except so far as the statute has modified the punishment. The deceased in this case, a poor, motherless child of 15, was incapable of consenting to an assault on herself, or on her unborn child. It is sickening to speak of her consenting to the act. It was as much a forcible act as though some scoundrel had met her on the road, and, knowing her condition, had seized her, and in the attempt forcibly to bring about a miscarriage had killed her.

Duty and Liability of Carrier of Sick Person—Physician Advising Trip

(C., B. & Q. R. R. Co. vs. Schrimpf (U. S.), 236 Fed. R. 200)

The United States Circuit Court of Appeals, Eighth Circuit, in affirming a judgment in favor of the plaintiff, as administratrix, for damages for wrongfully causing the death of her husband, says that, on the eleventh day after a physician called and found Mr. Schrimpf in bed complaining of a severe cold and congestion of the lungs, he was deemed well enough to take home, a distance of about 55 miles by rail. It was in March. The day was cold, disagreeable, inclement, damp and wintry. The man had on heavy winter underwear, an ordinary suit of clothes, heavy overcoat and a heavy cap. He was placed on a cot with a heavy blanket or rug over him, and a fur-lined overcoat over that. He was then carried across the street about 50 feet to a baggage car of the defendant. At one station for fifteen minutes or more he was lying in the front part of the car with his head toward the rear and about one foot in advance of the doorways. The doors were both wide open, and a cold and heavy wind was blowing across the car, although no reason was shown for having the doors on opposite sides of the car both open. During this time he complained of discomfort, of being cold. He commenced to show more congestion in the lungs and had more difficulty in breathing. On the following morning he displayed symptoms of pneumonia, and he continued to grow worse until he died of lobar pneumonia. While the evidence showed the degree of protection already indicated, it did not show whether the man's face and neck were covered with the blankets or the fur overcoat, and, under the circumstances, the court cannot say that a physician's answer (favorable to the plaintiff) to a long hypothetic question was not based on the facts stated in the question or was not consistent with the facts brought out in the plaintiff's case.

Nor can the court concur in the contention that there was no evidence to warrant a verdict in the plaintiff's favor. It was true that the man had been sick; but, of course, that did not authorize any one to give him a fatal blow. There seemed to have been no necessity for having the doors open on opposite sides of the car when he was lying at the station referred to before, and if one of the doors had been closed the draft would have been nominal. In his condition the company was bound, not only to high care, but to such care commensurate with his condition, and the worse he was the more care was due him from the railroad company. Both of the physicians who attended him testified that in their opinion it was this exposure that caused his death. It was true that another physician testified for the defendant to the contrary; but there was not only sufficient evidence to go to the jury, but apparently a preponderance of the evidence that the defendant's negligence caused the man's death. It was next contended that he was guilty of contributory negligence in taking the trip in his disabled state. But he was not negligent in the selection of his physician, and his physician testified that he was well enough to make the trip, and that he so advised him. The defendant asked the court first to set aside this testimony, and then to hold that the physician was negligent in consenting that the man make the trip, and that his negligence would be imputed to the man. The court, however, cannot find from the evidence that the man was not in condition to make the trip, and this disposed of the whole question of contributory negligence. It was not necessary for the court to express an opinion as to whether, when one employs a physician who negligently advises him to take a trip, and then employs a carrier to take him on the trip, the negligence of the physician can be imputed to the patient, so as to defeat a recovery by him against the carrier for its negligence. Still, under standard authority, even if the physician was negligent, and his negligence was imputed to the patient, it would not defeat a recovery.

Leaving Rubber Tube in Patient's Body—Competency of Evidence

(Saucier vs. Ross (Miss.), 73 So. R. 49)

The Supreme Court of Mississippi, Division B, reverses a judgment that was rendered in favor of the defendant, who was charged with having been negligent in an operation on the plaintiff for an abscess and the subsequent treatment. The court says that the plaintiff swore that the defendant was her physician at the time the operation was performed; that he performed the operation, attended her from time to time while she was in the hospital, and finally discharged and sent her home; that the defendant had put a rubber tube in her wound; that he was the only physician who had done this; that he had charge of the case, and that he had left the rubber tube in her wound, and that the flesh had grown over the same; that after the rubber tube had been in her side for nearly two years she again went to the defendant, who cut same out, and, on being charged by the plaintiff with having left the rubber tube in her, he made no denial. The testimony rather tended to show that gauze which came out of her wound was not the same gauze put there by the defendant, but gauze which had been used after the patient reached her home. The testimony showed that so long as the rubber tube was in her body, the wound in her abdomen caused by the operation would not yield to treatment, and that she suffered severely therefrom. The testimony further showed that when the rubber tube was removed from her body, the wound healed up promptly. In addition to this, the testimony for the plaintiff showed that she spent large sums of money for doctors' bills, and otherwise, in the treatment of this wound. On motion, the trial judge excluded the plaintiff's testimony. This was error. Unexplained, the leaving of a 4-inch rubber tube in a patient's body by a physician is negligence, and it occurs to the court that it would be very difficult for a physician to explain how he could leave a rubber tube in a patient's body, until the wound healed over same, and not be guilty of negligence in the treatment of his patient. It was no answer to the plaintiff's suit that the rubber tube may have been left in her wound by an attendant nurse or other physician in the hospital. She testified that the defendant was her physician and operated on her and attended her while in the hospital, and that the other physicians were acting under his directions in the treatment of her, and that he discharged her from the hospital at the time she left. Lastly, on cross-examination of the plaintiff, the defendant was permitted, over objection, to introduce in evidence a telegram of good wishes and a Christmas card from the plaintiff and her husband to the defendant, sent after the discovery of the rubber tube in her body. This testimony was incompetent and should have been excluded. It did not tend to show that the plaintiff's version of her troubles was not true, nor would any such courtesies show a condonation of her grievances.

Right of Action Surviving to Husband Against Proprietor of Hospital

(Bailey vs. Long (N. C.), 90 S. E. R. 809)

The Supreme Court of North Carolina, in overruling a demurrer to the complaint in this case, after it had been sustained in the court below, says that it was alleged in the complaint that the plaintiff took his wife, who was suffering with a broken hip, to the defendant's hospital for treatment. That by reason of the defective condition and construction of the hospital, and especially on account of the defective condition and construction of the windows of the room in which the plaintiff's wife was placed, the rains beat into the room to such an extent that the floor was covered with water to a depth of more than 1 inch on several occasions, and was allowed to remain so for several hours, thus rendering the room cold and damp, on account of which the plaintiff's wife contracted a severe cold, which developed into pneumonia, from which she died. That the unhealthy and improper condition of said room was due to the gross carelessness and negligent acts of the defendant, by reason of which, and the failure in duty of the defendant, the plaintiff was greatly and seriously damaged and suffered great pain and mental anguish (*a*) to his feelings and sympathies in witnessing the agony and suffering of his wife while lingering with such cold and pneumonia, and in the act and article of death resulting therefrom; (*b*) in the loss of the society of his wife, and (*c*) in the loss of her services. The ground of the demurrer was that no cause of action was stated in the complaint that survived the death of the wife. At common law the right of action for an injury to the person abated on the death of the person injured, under the maxim "a personal action dies with the person." But causes of action accrued to those who stood to the deceased in the relation of master, parent or husband for recovery of damages for loss of service or society. In addition, the court thinks the plaintiff could recover damages for the mental suffering and injury to his feelings in witnessing the agony and suffering of his wife while lingering with the cold and pneumonia, and in the act and article of death resulting therefrom.

Temporary Ailments Disregarded

(National Council Knights and Ladies of Security vs. Owen (Okla.), 161 Pac. R. 178)

The Supreme Court of Oklahoma, in affirming a judgment in favor of the beneficiary on a benefit certificate issued by the society, holds that the fact that an applicant for life insurance is temporarily indisposed at the time of making the application will not avoid the policy, if the illness is not of a character to affect his health permanently, or render him more susceptible to the attack of disease, although he represents in the application that he is in good health at the time. And where, by the terms of a policy of life insurance, the answers to the questions are made warranties, and the applicant answers "no" to certain questions relative to "disease" of specific bodily organs, it is held that the term "disease," within the intention of the parties to the contract, does not include slight or temporary ailments of such organs, and that, the testimony being in conflict as to the breach of such warranties, a question is presented for the determination of the jury.

Society Proceedings

COMING MEETINGS

Idaho State Medical Association, Sandpoint, June 25-26.
Montana Medical Association, Kalispell, July 11-12.
Oregon State Medical Association, Portland, June 28-30.
Washington State Medical Association, Spokane, June 17-19.

ASSOCIATION OF AMERICAN PHYSICIANS

Meeting held in Atlantic City, May 2-3, 1917

(Continued from page 1777)

Lung Ventilation

DR. C. F. HOOVER, Cleveland: The respiratory excursion of the upper thorax is characteristically modified, as shown by clinical and experimental studies, in: (1) when the scaleni are paralyzed; (2) when the intercostal muscles are paralyzed, and (3) when extensibility of the upper lober is impaired. Respiratory excursions give valuable information on: (1) the total lung volume; (2) the relative enlargement of the left and right ventricles of the heart; (3) the total enlargement of the heart; (4) enlargement of the pericardial sac; (5) paralysis of the intercostal muscles and paralysis of the diaphragm; (6) differentiation between paralysis of the diaphragm and activation of the diaphragm without excursion of the leaf of the diaphragm, and (7) the size of the respiratory unit; and they give an explanation of the error of Duchenne's interpretation of the diaphragm.

Significance of the Percentage of Carbon Dioxid in the Alveolar Air in Pneumonia Patients Who Are Cyanotic

DRS. R. D. PEARCE and C. F. HOOVER, Cleveland: The carbon dioxid pressure in the alveolar air is found to be lower than normal in some cases of fibrinous pneumonia. In these cases cyanosis is present, but there is no evidence of cardiac impairment, air hunger or acidosis. Patients with massive pneumonia who have no cyanosis have a normal or high percentage of carbon dioxid in the alveolar air. The capacity in both conditions is less than was expected. An explanation of this phenomenon may be found in the assumption that the pulmonary circulation continues through the consolidated lung after its respiratory function has failed. This condition would supply venous blood to the left heart which, acting as a diluting agent to the arterial blood, would increase the tension of the oxygen in the arterial blood. The increased tension of the carbon dioxid in the blood stimulates the respiratory center with the result that the minute volume of the respiration is increased and the percentage of carbon dioxid in the alveolar air is reduced. The blood passing through the healthy lung has a lower than normal content of carbon dioxid to compensate for the high percentage of carbon dioxid in the venous blood with which it is mixed in the left heart. However, since the blood which passes through the healthy lung is fully saturated with oxygen, no compensatory mechanism can be established by which the oxygen content in the mixed blood in the left heart can be brought to normal oxygen tension. The blood therefore appears cyanotic. The condition is somewhat analogous to that found in congenital heart disease.

Clinical and Pathologic Features of Bronchiectasis

DR. ALFRED STENGEL, Philadelphia: Among 63 cases 36 cylindric, 18 saccular and 9 cylindric and saccular, there were 9 cases of bronchiolitis, 7 cylindric and 2 cylindric and saccular. Of the pneumonias there were 17 cases, 12 cylindric and 5 sacculated. There were 27 tuberculous cases, 12 cylindric and 10 sacculated, and 5 cylindric and sacculated. There was 1 case of atelectasis—cylindric. The cylindric and generalized bronchiectases are amenable to medical treatment. The most important sign associated with respiration is the "trap-door" breathing, a condition not described in the literature. Some call it the "veiled puff." The upper lobes may be involved, but the lower lobes are more frequently the seat of the disease.

Gastric Polyposis

DRS. JULIUS FRIEDENWALD and JOHN M. T. FINNEY, Baltimore: In two cases of this condition, operation was performed and the condition demonstrated. In both instances carcinomatous degeneration was observed. The histories, Roentgen examination and gastric findings pointed toward cancer. A third case presented a most marked instance of polyadenoma gastrica. The underlying cause of adenoma papillomata is a chronic gastritis. In some cases the symptoms are very severe.

DISCUSSION

DR. WILLIAM S. THAYER, Baltimore: Twenty-five years ago I was interested in a case. The patient was a woman, aged 60 or 70, who presented symptoms of pyloric obstruction. No examination of the gastric juice was made. No metastasis could be made out. At necropsy a long pedicle was found which engaged the pylorus and caused almost complete obstruction. The microscopic examination did not show any evidences of carcinoma.

DR. THEODORE C. JANEWAY, Baltimore: I have seen a case showing the great motility of the tumor which lay between the ensiform and the right iliac region, but never was in the same part of the abdomen on two consecutive days. The symptoms and signs were those of carcinoma of the stomach. At necropsy there was found a pedunculated adenocarcinoma of the stomach which hung by a long pedicle.

Maintenance Diet in Diabetes Mellitus

DR. HERMAN O. MOSENTHAL, Baltimore: An attempt has been made to determine what constitutes a maintenance diet in diabetes mellitus. Carbohydrates were eliminated from the diets, except such as were contained in green vegetables. It was found that in order to furnish food that was palatable over a long period it was not possible to reduce the number of grams of fat below those of protein. The nitrogen balance was determined in a series of patients under these dietary conditions. It was found that in an average person a nitrogen balance could be obtained on a carbohydrate-free diet of from 1,500 to 1,700 calories. The practical conclusion to be drawn from these observations is that every diabetic patient who is treated by means of a carbohydrate-free diet in which the number of grams of fat and protein are approximately equal to one another should ingest at least between 1,500 and 2,000 calories of this food in order to insure a nitrogen equilibrium, that is, a maintenance diet. When the glucose tolerance of the patient has warranted it, the diet when increased beyond 1,690 calories in small persons or 2,000 in large persons, has usually been augmented by the addition of starch-containing food and not by further protein and fat.

Diabetes in Children

DRS. E. P. JOSLIN and HORACE GRAY, Boston: A series of 123 cases of diabetes in children under 15 years of age was analyzed. Five patients have gone on eight or nine years and appear to be in good condition and sugar-free. The duration of the disease in the patients either living or dead up to this time averaged 1.1 years. Obesity plays an important part in the etiology of diabetes in adults, 40 per cent. of patients showing it.

Association Between Diabetes Mellitus and Tuberculosis

DR. S. SOLIS COHEN, Philadelphia: I have been unable to determine what the relation between the two conditions is and I have been unable to find any statistical evidence that is of value. There are, however, certain facts gathered from the family histories possibly indicating that there is some fundamental relation which is vaguely called constitutional, congenital or hereditary, and the conditions of metabolism of the patients. In the negro, tuberculosis is common and diabetes rare; white people, on the other hand are relatively immune to tuberculosis and prone to diabetes. Many of the patients coming under my observation have been obese or gouty. These associations are suggestive of some relation between the two conditions, and it seems that diabetes is liable to eventuate in tuberculosis.

DISCUSSION

Dr. Nellis B. Foster, Ann Arbor: The conditions which lead to the death of diabetic patients are peculiar. Not only are there severe nutritional disturbances which give rise to a peculiar blood picture, but also there are many other conditions which may cause certain organic changes. We have made a fundamental mistake in regarding diabetes as one disease. There is certainly the greatest possible difference between the clinical pathology and other manifestations. Glycosuria in a child does not mean diabetes in the sense in which we understand this term. The child will not get the characteristics of this disease unless the diet is bad and the child wasted.

Dr. D. D. Van Slyke, New York: A question that arises with me is, Is acidosis caused by the acetone bodies, only the retained acid, or is it due also to the acidosis form of excretion? The more acetone bodies in the blood the more severe the acidosis. The acid formed in the blood is neutralized by sodium bicarbonate. The acid doing the damage is retained, but it could be excreted and take alkali with it. This damages the body by causing a double acidosis, the kind that develops the typical diabetic coma. These patients die because of the concentration of the acetone bodies in the blood.

Dr. Frederick Madison Allen, New York: Diabetes anatomically is a destruction of the islands of Langerhans. It is impossible to think of any diet as being curative of diabetes. It is a fact, too, that persons are killed because of the gloomy prognosis given them. The treatment is improving, and the time will come when these patients can be saved.

Dr. E. P. Joslin, Boston: Three per cent. of my patients had tuberculosis with their diabetes. With regard to the Jewish race in Boston, a paper was published not long ago which covered a period of fifteen years, and this writer found that in proportion to the population there was a remarkable increase of this disease among Jews. It is best to keep patients on a low diet, but yet to maintain their weight. In my experience in the treatment of children with diabetes, I have never seen a case in which the physician or family gave up treatment in which the child was not in a worse condition than it would have been had the treatment been followed straight through to the end.

Dr. S. Solis Cohen, Philadelphia: Diabetes is common among the Jews, both rich and poor. Tuberculosis is rare among rich Jews but quite frequent among the poor, and especially the Russians, but the proportion of cases of tuberculosis among the Jews is less than among those of other races under the same social conditions.

Subacute and Chronic Nontuberculous Pulmonary Infections

Dr. J. L. Miller, Chicago: These cases may be grouped into three types: the subacute, the subacute with recurrences, and the chronic type. Of the first type there were nine cases, characterized by mild onset, and slight febrile disturbances lasting about five days. The expectoration was purulent, sometimes with hemoptysis. There was no pain, and the physical signs were characteristic, and limited, as a rule, to the lower lobe. There was usually a slight impairment of resonance and diminished vesicular breathing, and moist râles over the entire lobe. These cases usually present the physical signs of tuberculous infiltration. I have seen evidences of consolidation. Among these nine cases the fatal termination occurred in from four weeks to six months. The physical signs might persist for two or three months and then disappear. In all these cases the examination of the sputum for tubercle bacilli was consistently negative. One of the characteristic and striking signs in these cases is the lack of evidence of pulmonary markings.

There were six cases of the second type, much like the first type except that the condition recurred at intervals of several months or a year. In one instance four recurrences were noted. In each recurrence the signs and symptoms were the same and always in the same area. In four, the roentgenogram was absolutely normal. There were seven cases of the third type. In these the signs never cleared up, though there were exacerbations in the symptoms. In three cases, pain was present. Pneumococci of Type 4 were found in four cases, and the *Streptococcus viridans* in three. The number of bacteria were increased during exacerbations. In the last type the roentgenogram showed in all increased mottlings, very marked in two. Pleuritic adhesions were present in four cases. The ages of these patients ranged from 1 to 60 years. The subacute type predominated in the young people. The seasonal incidence was the cold months. In thirteen cases the left lobe was the seat of the lesion, in five the right lobe, in three both lobes, and in one right upper and left. Cultures were taken in twenty-one cases, of which ten showed the pneumococcus of Type 4, eight the influenza bacillus, and three the *Streptococcus viridans*. The Roentgen ray showed seven normal cases, ten with increased mottlings, and in the chronic type, four with adhesions. There was one with effusion.

DISCUSSION

Dr. James B. Herrick, Chicago: I have had six cases of the subacute type with recurrences. In one case there were five recurrences in as many years. Roentgenoscopy revealed the same signs as in the subacute type. In the chronic type there never seemed to be any clearing up. There were exacerbations of the symptoms that were similar to the acute type with the recurrences. I have had seven cases, three of which showed distinct pain. In all seven cases, roentgenoscopy revealed similar changes. In four there were evidences of pleuritic adhesions. Recovery occurred within a few months in the subacute cases.

Dr. Nathan E. Brill, New York: In the first pandemic of influenza in 1888 and 1889, I saw these cases for the first time. In most instances the lower left lobe was attacked, while in a few cases the left upper lobe, the right lobe, or both were affected.

Dr. H. A. Hare, Philadelphia: Two or three years ago, I pointed out that there were no physical signs in these cases characteristic of tuberculosis. It is important to recognize this.

Dr. Lawrason Brown, Saranac Lake, N. Y.: We should prove that these cases are not tuberculous before discharging the patients. I should like to know what the condition of the antrum and sinuses was in these cases.

Dr. J. L. Miller, Chicago: Aside from coryza, there seemed to be no infection of the air passages.

A Roentgenologic Study of Pneumoconiosis

Drs. H. R. M. Landis, H. K. Pancoast and T. G. Miller, Philadelphia: We have examined thirty-seven potters and a number of cement workers. Different kinds of dust produce different varieties of damage, and different individuals react differently to particular dusts. The changes produced by organic dusts are quite definite. Dusts have a tendency to collect at the junctions of the lymph channels, and the terminal stage is a fibrosis which is quite extensive. During the first five years, practically nothing is shown; during the next ten years, the linear markings are more distinct, and at about the fifteenth year, they become quite distinct, and a diffuse fibrosis occurs. There is also a marked dilatation of the bronchi.

DISCUSSION

Dr. George M. Kober, Washington, D. C.: It has been estimated that half of the deaths from tuberculosis occur among industrial workers. The majority of workers who are exposed to dust of any kind continuously have some chronic disease of the respiratory tract, and many of them develop pneumoconiosis.

Dr. W. M. L. Coplin, Philadelphia: I believe that chronic lymphangitis is back of this trouble. Accompanying these lesions are bronchitis, edema of the skin, and a bronchial asthma. In the latent, mild chronic or subacute, there is a retardation of the lymph flow through the tissues.

Dr. Charles G. Stockton, Buffalo: Some years ago a case similar to these was described which was caused by the great amount of dust in an elevator. I have since seen many of these cases due to the dust in elevators in which no precautions were taken to protect elevator men and no proper provision was made for ventilation. The late cases go on to

interstitial pneumonia, occasionally with cavity formation and sometimes asthma. These cases may be described as "elevator pneumonias" of slow progress.

DR. DAVID L. EDSALL, Boston: It has been shown that where there has been a constant exposure to dust there is a proneness to chronic as well as to acute pneumonia. The extraordinary thing about this exposure is the long period of time through which people may be exposed and apparently suffer no ill effects from it.

DR. H. R. M. LANDIS, Philadelphia: The fibrinous process tends to retard rather than to accelerate the progress of the disease.

Aortic Aneurysm Treated by Wiring

DR. HOBART A. HARE, Philadelphia: In twenty-seven wirings, the pain was allayed or relieved before the operation was complete. As the expansible pulsation was simultaneously decreased, the relief of the pain might be due to the relief of eroding pressure or to the sedative effect of the galvanic current. In cases in which the aneurysm is the result of trauma, the outlook is better than in those cases in which it is a manifestation of arterial disease. It is essential not to mistake a fusiform aneurysm or a growth for a sacculated or false aneurysm. The form of aneurysms suited to this procedure are the saccular ones. The point of greatest bulging or giving way must be chosen. The needle must be insulated properly and not pushed too far so as to cause an electrolytic burn. The wire must be gold and platinum, so as not to undergo electrolytic changes. Gold and copper alloy is eaten through rapidly. It is important that the wire have spring, but it must not be too strong. If silver wire is used it will not coil. The positive pole must be in the sac. If street current is used it must be reduced, the operating table insulated, and the surgeon's feet covered with rubber shoes. The current must not be too strong. One should start at 5 milliamperes and rarely go above 40, raising 5 every five minutes and gradually reducing it. The current should never be broken. The wire should be 28 B. and S. gage. This procedure is not dangerous if carried out promptly.

Occurrence of Bilirubin in the Plasma and in Other Body Fluids

DRS. M. A. BLANKENHORN and C. F. HOOVER, Cleveland: Four hundred specimens of blood plasma, obtained free from hemolysis, were examined for bilirubin, bile salts and urobilin, and a smaller number for cholesterin. The findings were correlated with an examination of the urine and the appearance of the skin. In 153 cases there was cholemia without choluria. Bile salts were found in the urine in 102 instances. In 133 cases examined for urobilin in the blood, twenty-two were positive, the urobilin being present in large amounts. Often we found urobilin in the urine and not in the blood. In Laennec's disease of the liver, cholemia was found without choluria. Cholelithiasis was not demonstrable.

Causation and Curability of Certain Long-Standing Albuminurias

DR. DAVID RIESMAN, Philadelphia: Cases of long-standing albuminuria should not be considered as incurable. Albuminuria may be kept up by the presence of stone or of some offending foci. When patients are cured of such albuminurias, they usually continue to live for years.

DISCUSSION

DR. THEODORE C. JANEWAY, Baltimore: Posture is one of the most significant causes of albuminuria. "Orthostatic albuminuria" is an incorrect term. It is often difficult to say whether or not the postural albuminuria is the only condition present. It has been stated that in many of these cases, if the patients are put to bed for three quarters of an hour, the albuminuria cleared up. This is a mistake, for the kidneys do not recover with such rapidity. It has been found that when patients run about they do not have albuminuria, but when they stand still they have it. One patient presenting albuminuria and hyaline casts in the urine was shown to have a stone. With the removal of the stone, there was a disappearance of the albumin and casts. Another interesting case was that of a man who was refused by a life insurance company because of showers. In the afternoons he took up boxing, and albumin and casts later appeared in the urine. I saw the man thirty years after this discovery was made.

DR. WILLIAM S. THAYER, Baltimore: I recall one patient, 14 or 15 years of age, who was brought to me with the suggestion that a warm climate was best for him. He was suffering from an infection from adenoids and tonsils. Tonsillectomy and removal of the adenoids caused the symptoms to disappear. Albuminuria sometimes follows cold bathing in the morning.

DR. LEONARD G. ROWNTREE, Minneapolis: I recall the case of a man who was normal except for the presence of albumin and a few casts. This man had bad tonsils. There has been an immense improvement since the diseased tonsil was treated.

DR. MILTON H. FUSSELL, Philadelphia: One great difficulty when we find foci of infection in the teeth is to know just what kind of treatment to employ.

Elimination of Uric Acid in Gout and Other Forms of Arthritis

DRS. JOSEPH H. PRATT and C. W. MCCLURE, Boston: Retention and delayed excretion of uric acid occurs in other diseases as well as in gout. A retarded and diminished excretion of uric acid is probably not an essential factor in the product of gout. Injected uric acid remains in the blood of gouty patients longer than in the blood of the nongouty. Some impairment of renal function is found in all cases of gout studied by the newer methods.

DISCUSSION

DR. LEWELLYS F. BARKER, Baltimore: The majority of cases diagnosed as gout at the spas are not cases of gout at all but of an infectious arthritis or an ostearthritis. The unreliability of the methods of studying uric acid must be emphasized. I think the evidence favors the view that in gout, renal insufficiency is at fault as regards the excretion of uric acid.

DR. JOSEPH H. PRATT, Boston: As to the endogenous output, if the diet is purin-free the uric acid is low. It is important that observations should be made on young persons.

Influence of Pituitary Solution on the Urinary Excretion in Diabetes Insipidus

DRS. LEWELLYS F. BARKER and HERMAN O. MOSENTHAL, Baltimore: In a patient who was suffering from diabetes insipidus, the urinary output could be reduced from 8 to 10 liters in twenty-four hours to a normal output, and the specific gravity could be increased correspondingly. The effect of each injection was marked for about four hours. Single injections, though the dose was large, had little effect. The minimum dose was 1 c.c., and more than two injections seemed to give no additional advantage.

DISCUSSION

DR. J. L. MILLER, Chicago: Pituitary solution in either normal or diseased persons causes a reduction in the urinary output. Following an injection of 5 c.c. of pituitary solution a man had a terrific headache. For the first time in eight years, he was not compelled to rise at night to urinate. Intramuscular injections were given without effect. The posterior lobe was effective in these cases.

DR. THOMAS B. FUTCHER, Baltimore: A point to be emphasized is that injury to the pituitary gland may result in diabetes insipidus. Pituitary solution increases the output of the urine and the specific gravity, and also the ability of the urine to concentrate salt and nitrogen. Cushing's observations on the pituitary gland are of interest. In twelve out of 100 cases of pituitary tumor, there was an increased flow of urine. Many of these patients had a marked polyuria, and six came to necropsy with the diagnosis of diabetes insipidus.

DR. S. SOLIS COHEN, Philadelphia: I recall two cases of diabetes insipidus. One patient, a man, aged 30, in addition to passing large quantities of urine, complained of severe pain in the left hypochondrium. Pituitary solution caused the urine to clear up, but the pain continued. An adhesion was found between the colon and the stomach, the cause of which was not evident. These adhesions were liberated, and

the urinary output fell from 11 or 17 liters a day to 2 liters. The second patient, a girl, aged 18 or 19, had a urinary output of 8 liters a day. After the administration of pituitary solution it fell to 2 liters a day.

DR. HENRY KOPLIK, New York: I have been able to collect reports of three cases of diabetes insipidus so far. It is difficult to separate the two classes of cases. This new therapy is applicable to a certain set of cases.

DR. LEWELLYS F. BARKER, Baltimore: The observation of the Mayos is true, that where there is an inability to secrete urine without some form of therapy, pituitary solution had been found to be effective in overcoming this inability. In the hereditary cases there is something at fault; the pars intermedia seems to be the actual site of the disease in diabetes insipidus. In cases in which the posterior lobe has been destroyed, substitution therapy must be carried out as long as the patient lives.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

June, XIII, No. 6

1 *Occlusion of Aqueduct of Sylvius in Relation to Internal Hydrocephalus. M. G. Schlapp and B. Gere, New York.—p. 461.
2 *Diagnosis of Spinal Cord Tumors in Childhood. Report of Case of Tuberculoma of Cerebrum and Spinal Cord. R. L. Ash, San Francisco.—p. 487.
3 Physiology of New-Born Infant. F. B. Talbot, Boston.—p. 495.
4 Use of Longitudinal Sinus for Diagnostic and Therapeutic Measures in Infancy. A. Brown and G. E. Smith, Toronto, Canada.—p. 501.
5 Prodromal Symptoms of Infantile Paralysis. M. G. Wilson, New York.—p. 506.
6 Posterior Basic (Walled-Off) Meningitis; Report of Case with Recovery. A. Sophian, Kansas City, Mo.—p. 514.

1. Internal Hydrocephalus.—The results of the clinical, postmortem and histologic investigations in eight cases of internal hydrocephalus of the obstructive type are studied by Schlapp and Gere, bringing special emphasis to bear on the obliterating lesion of the aqueduct of Sylvius as a cause of ventricular distention. Of this group, examined without selection, all showed either complete occlusion of the aqueductus cerebri or obliteration of the fourth ventricle through severe pathologic changes occurring in the ependymal or subependymal tissues of these regions. Reviewing the facts in these cases the authors arrive at the conclusion that it is not unreasonable to attribute many, if not the majority, of cases of the congenital form of this disease to closure of the aqueduct of Sylvius through proliferation of the glia and ependymal tissues, or to invasion of the fourth ventricle by tumors having their origin in the floor, the choroid plexus or the membranous roof of the ventricle. Those cases, also, developing acutely in previously healthy adults and older children, and which have shown microscopically the same pathologic changes, may have been brought about in the same manner, namely, through the stimulation by some chemical poisoning of a tissue which is embryologically defective. In cells which have become highly specialized, as the nerve cell, gland cell and muscle cell, the potential energy of the cell body is converted into the predominating activity, and the formative process is held in abeyance, and, so long as the normal relation between synthesis and catalysis is maintained, functional activity of the cell remains in a state of constancy. On the other hand, in those cells not highly specialized, as the ependymal, glia and the connective tissue cells, formative activity is easily awakened, and so it happens that in many cases of hydrocephalus, stimulation of these cells by some irritating substance results in an active proliferative process involving the ependyma and the subependymal tissues of the aqueduct of Sylvius, as seen in the obliterative glioses which figure conspicuously in the authors' cases.

2. Spinal Cord Tumors.—Of special clinical interest in Ash's case was the fact that a tumor of the spinal meninges, which was diagnosed during life, was the first manifestation of a generalized tuberculosis in a child of 19 months. Xanthochromia with massive spontaneous coagulation and pleocytosis was an attending syndrome.

American Journal of Insanity, Baltimore

April, LXXIII, No. 4

7 Social Service in State Hospital. G. M. Kline, Hathorne, Mass.—p. 567.
8 Psychosis Presenting Schizophrenic and Freudian Mechanisms with Schematic Clearness. C. C. Wholey, Pittsburgh.—p. 583.
9 Psychanalytic Tendencies. W. A. White, Washington, D. C.—p. 599.
10 Psychiatric Aspects of Pellagra. W. C. Sandy, Columbia, S. C.—p. 609.
11 Manic Depressive Psychosis in Negro. E. M. Green, Milledgeville, Ga.—p. 619.
12 Manic Depressive and Dementia Praecox Psychoses; Their Differential Symptomatology. H. H. Drysdale, Cleveland.—p. 627.
13 Psychology of Hysteria. W. G. Somerville, Memphis, Tenn.—p. 639.
14 Dreams and Their Interpretation. R. Armstrong-Jones, London.—p. 655.
15 Reception, Examination and Care of New Admissions. C. G. Wagner, Binghamton, N. Y.—p. 673.
16 Biologic Aspects of Dementia Praecox. F. W. Langdon, Cincinnati.—p. 681.
17 War and Neurosis. C. B. Farrar, Canada.—p. 693.
18 Psychoneuroses, Psychoses and Mental Deficiency in Two Thousand Cases Considered Especially from Standpoint of Etiologic Incidents and Sex. A. Gordon, Philadelphia.—p. 721.

American Journal of Public Health, Boston

May, VII, No. 5

19 Statistical Study of Diphtheria. F. S. Crum, Newark, N. J.—p. 445.
20 U. S. Army Methods of Disposal of Camp Refuse. J. M. Phalen.—p. 481.
21 Examination of Recruits for Army and Militia. H. D. Orr, Chicago.—p. 485.
22 Principal Defects Found in Persons Examined for Service in United States Navy. C. A. Costello.—p. 489.
23 Dispensary Problems of Gonorrhea and Syphilis. A. N. Thomson, New York.—p. 493.
24 Maine's New Health Law. C. E. Turner.—p. 502.

Archives of Internal Medicine, Chicago

May, XIX, Part II, No. 5

25 *Clinical Calorimetry. Basal Metabolism of Old Men. J. C. Aub and E. F. Du Bois, New York.—p. 823.
26 *Id. Effect of Caffein on Heat Production. J. H. Means, Boston; J. C. Aub, E. F. Du Bois and G. F. Soderstrom, New York.—p. 832.
27 *Id. Basal Metabolism of Dwarfs and Legless Men; Specific Dynamic Action of Protein. J. C. Aub and E. F. Du Bois, New York.—p. 840.
28 *Id. Respiratory Metabolism in Nephritis. J. C. Aub, E. F. Du Bois and G. F. Soderstrom, New York.—p. 865.
29 *Id. Effect of Roentgen-Ray and Radium Therapy on Metabolism of Patient with Lymphatic Leukemia. J. B. Murphy, J. C. Aub, New York, and J. H. Means, Boston.—p. 890.
30 *Id. Metabolism in Three Unusual Cases of Diabetes. F. C. Gephart, J. C. Aub, E. F. Du Bois, G. Lusk and G. F. Soderstrom, New York.—p. 908.
31* Id. Water Elimination Through Skin and Respiratory Passages in Health and Disease. G. F. Soderstrom and E. F. Du Bois, New York.—p. 931.

25. Metabolism of Old Men.—A group of six men between the ages of 77 and 83 were studied in the calorimeter by Aub and Du Bois. Their average basal heat production was 35.1 calories per square meter per hour, which is 12 per cent. below the average for men between the ages of 20 and 50. The methods of direct and indirect calorimetry agreed closely and the respiratory quotients were all within normal limits.

26. Caffein and Heat Production.—An increase of from 7 to 23 per cent. in the basal metabolism was found in four normal subjects after receiving 8 to 10 grains of caffein alkaloid (8.6 mg. per kg. of body weight). After taking the drug there was no significant change in the pulse rate, in the respiratory quotient, in the proportions of the various foodstuffs metabolized, or in the percentage of heat lost in the vaporization of water. The independent methods of direct and indirect calorimetry gave results which agreed within 1 per cent.

27. Metabolism of Dwarfs and Legless Men.—The basal metabolism of five dwarfs, two legless men and six normal

controls is reported by Aub and Du Bois. The legless men and the dwarfs, with apparently normal endocrine systems, showed, in relation to their surface area, the same level of metabolism as normal men. The law of surface area holds good for men of unusual body shape. The dwarfs with involvement of the ductless glands and symptoms of cretinism showed a marked reduction in metabolism below the average found in normal cases.

28. **Respiratory Metabolism in Nephritis.**—Five patients suffering from nephritis of the chronic interstitial type, without edema, were studied by Aub and Du Bois. One with marked uremia was at the normal level of metabolism. Another, who was very restless, showed an increase. A third, in whom hyperthyroidism was suspected, also showed an increase. The other two were near the upper normal level of metabolism. In most of the patients with greatly increased blood pressure the metabolism was higher than in the other nephritics with lower blood pressures. Most of the patients with marked dyspnea showed some increase in metabolism. No relationship could be established between the level of metabolism and the degree of acidosis or the eliminative power of the kidney.

29. **Metabolism in Leukemia.**—A man, aged 59, with chronic lymphatic leukemia was studied five times in the respiration calorimeter. When first observed his metabolism was 44 per cent. above the average normal, falling a little with rest in bed. Intensive treatment with Roentgen rays caused a drop in the leukocyte count but did not appreciably affect the level of his metabolism. The water elimination through skin and respiratory passages was unusually high. Direct and indirect calorimetry gave total results which were almost identical, and no abnormal respiratory quotients were found. After treatment with radium, a further and very marked fall occurred in the leukocyte count and, at the same time, a slight fall occurred in the basal metabolism.

30. **Metabolism in Diabetes.**—Three cases of diabetes studied in the respiration calorimeter are reported. Case 1, a diabetic woman, through prolonged fasting had been brought to a level of metabolism 37 per cent. below the standard level for her height and weight, a metabolism which was only 40 per cent. of the original normal value before the initiation of fasting. This is the lowest level of metabolism ever recorded. Case 2, a patient with a mild case of diabetes, whose urine was free from sugar, became suddenly and completely diabetic on the administration of a high protein-fat diet, and, on fasting, rapidly regained his former tolerance for sugar. Case 3, an acute case of complete diabetes which, in high protein metabolism and in high D. N ratios, resembled experimental diabetes in animals. When given meat and fat, the patient not only excreted all the sugar derivable from protein, but he also excreted all the beta-oxybutyric acid derivable from the fat metabolism of the time. Two months later when the metabolism was 35 per cent. below the normal for his height and weight, two-thirds of the total calories were derived from carbohydrate.

31. **Water Elimination in Health and Disease.**—According to Soderstrom and Du Bois, the output of water is very little affected in disease. When the heat production is increased the body responds and dissipates the usual percentage of calories in the vaporization of water. When it is necessary to get rid of unusual amounts of heat the percentage lost in vaporization is increased.

Arkansas Medical Society Journal, Little Rock

May, XIII, No. 12

32 Social Problems of Feebleminded. A. W. Stearns, Boston.—p. 249.
33 Epididymotomy. S. P. Bond, Little Rock.—p. 250.
34 Syphilis of Nervous System. C. L. Gregory, Greenville, Texas.—p. 251.

Boston Medical and Surgical Journal

May 24, CLXXVI, No. 21

35 Arteriosclerosis, with Special Reference to Diet. L. F. Bishop, New York—p. 721.
36 *Study of Twenty-Nine Cases of Echinococcus Disease at Massachusetts General Hospital. L. Davis and G. M. Balboni, Boston.—p. 726.
37 Mental States Responsible for Malingering. E. B. Emerson, Bridgewater.—p. 736.
38 Traumatic Injuries of Kidneys. F. Warner, Columbus.—p. 740.
39 Measles. D. M. Lewis, New Haven, Conn.—p. 742.

36. **Echinococcus Disease.**—In the last three years the echinococcus complemental test has been used at the Massachusetts General Hospital. Ninety-seven tests in all have been made. Twelve were positive and eighty-five were negative. Of the twelve positive cases, seven proved to be echinococcus disease. One of the five other patients at operation showed an abscess in the abdominal wall, which on microscopic examination showed no evidence of tuberculosis. Its appearance was not inconsistent with echinococcus cyst. One had clinicaliy a large spleen and liver, a positive Wassermann reaction, and was not operated on. Three were clinically syphilis and had weak to strongly positive Wassermann reactions. Among the eighty-five negative cases, twenty-four had a positive Wassermann reaction. The Wassermann reaction was negative in five of the proved echinococcus infections. It was not done in the remaining two. There was some variation in the strength of the echinococcus reaction in the same patient from time to time. The cyst fluid proved a better antigen than the alcoholic extract of the cyst wall. The cyst fluid was found active as an antigen after more than eighteen months outside of the body. The cysts were located in the liver alone in sixteen; in five cases other parts as well as the liver were involved, namely, peritoneal cavity twice, omentum lung and kidney once each. In the other eight cases the cysts were found in the brain, heart and pericardium once, kidney twice, peritoneum once, gastrohepatic omentum once, and retroperitoneal twice. In one case echinococcus cysts were passed in the feces, in another with the urine.

Bulletin of Lying-in Hospital City of New York

May, XI, No. 2

40 *Thrombosis of Cerebral Sinuses and Veins as Complication of Puerperium. J. R. Hunt, New York.—p. 73.
41 *Appendiceal Abscess with General Peritonitis by Streptococcus Viridans. J. W. Markoe, New York.—p. 80.
42 Case of Full Term Abdominal Pregnancy, with Macerated Fetus and Streptococcus Infection of Sac and of Uterus. A. B. Davis, New York.—p. 83.
43 Birth Control. G. W. Kosmak, New York.—p. 88.
44 Severe Case of Pyelonephritis with Colon Bacillus Infection of Blood, Complicating Pregnancy. R. McPherson and J. R. Losee, New York.—p. 100.
45 Five Cases of Ectopic Gestation. J. W. Markoe, New York.—p. 104.
46 Follow-Up System in Obstetrics. J. A. Harrar, New York.—p. 109.
47 *Routine Use of Cathartics During Puerperium. R. McPherson, New York.—p. 118.
48 Atrophy of Kidney Following Spontaneous Ureterosigmoidal Fistula. C. F. Jellinghaus, New York.—p. 120.
49 Puerperal Hysteria, Pregnancy Toxemia or Acute Poliomyelitis. J. A. Harrar, New York.—p. 123.
50 Case of Twin Pregnancy in Bicornuate Uterus. M. Rosensohn, New York.—p. 125.
51 Functions of State Medical Association Journal. G. W. Kosmak, New York.—p. 126.
52 Feeding of New-Born. R. H. Dennett, New York.—p. 130.
53 Phenolsulphonephthalein Test in Pregnancy. M. K. Smith, New York.—p. 134.
54 Case of Typhoid in Pregnancy. H. M. Ratliff, New York.—p. 142.

40. **Thrombosis of Cerebral Sinuses.**—Hunt reports the case of a primipara, 21 years old, who, on the twentieth day, after an apparently normal delivery and puerperium, was seized with severe headaches, vomiting and general convulsions. The convulsive seizures continued and were both general and jacksonian in type. Paralysis of the right side of the face, right arm and motor aphasia supervened. The patient gradually sank into a stupor and succumbed on the tenth day of the disease. Necropsy showed extensive thrombosis of the dural sinuses, the superior longitudinal, lateral and petrosal sinuses; also thrombosis of the cerebral veins with extensive hemorrhagic softening of the cerebral cortex, especially marked over the frontoparietal region. The histologic picture was one of hemorrhagic softening, without evidences of arterial disease or inflammation. The liver and kidneys were congested, otherwise normal. Diagnosis: Thrombosinusitis and thrombophlebitis with consecutive

hemorrhagic softening in the distribution of the occluded veins.

41. **Appendiceal Abscess Caused by Tooth Infection.**—A case of appendiceal abscess is cited by Markoe in which he believes the infection came from the roots of the teeth. The culture from the pus evacuated from the peritoneal cavity at the time of operation was pure culture of *Streptococcus viridans.*

47. **Cathartics During Puerperium.**—The value of catharsis during the puerperium was studied by McPherson in a large series of cases. Each patient was alternately placed in Ward A or Ward B as she came from the delivery room. The patients in Ward A had no catharsis administered at all, while to those in Ward B the usual routine with the various preparations in ordinary use was given. In the non-catharsis cases three days were allowed to elapse, and if no bowel movement occurred, a low saline enema was given; the patient's bowels then not disturbed until three more days had passed by, when another saline enema was given. This was continued until she was discharged from the hospital. The results were most interesting. Three hundred and twenty-two patients of each class were carefully observed; of the 322 cases to whom cathartics were administered, twenty-eight had fever at some time during the puerperium, fever being considered present when the patient had two consecutive temperatures of over 100.4 during the puerperal period. Of the 322 who received no catharsis only three had fever and one of these had a mammary abscess. The cases were in no way selected, the delivery technic was in all cases the same and by the same operators. The number of women who of themselves had a bowel movement normally without assistance every second or third day was fairly large; in none of the cases not receiving cathartics were there foul breaths, headaches, coated tongues, breast complications or the other time honored sequelae which are supposed to occur after a day or two of constipation. McPherson emphasizes the danger and uselessness of routine drugging, and the assigning of certain effects to conditions which have not been shown to be the cause of the symptoms exhibited.

Canadian Medical Association Journal, Toronto

May, VII, No. 5

55 Remote Symptoms from Lesions of Prostate and Deep Urethra. T. McCrae, Philadelphia.—p. 385.
56 Diagnosis of Tumors in Upper Zone of Abdomen. A. McPhedran, Toronto.—p. 393.
57 Acute Abdomen. F. N. G. Starr, Toronto.—p. 399.
58 Nitrous Oxid Oxygen Analgesia and Anesthesia in Obstetrics. G. G. Copeland, Toronto.—p. 405.
59 Analysis of Three Thousand Cases of Obstetrics. S. P. Ford, Norwood.—p. 412.
60 Heliotherapy in Abdominal Tuberculosis. J. H. Elliott, Toronto. —p. 420.
61 Gastric and Duodenal Ulcers; Report of Cases. A. Moir.—p. 426.
62 Transfusion in Ruptured Ectopic Pregnancy. N. H. Beal, London, Ontario.—p. 440.

Colorado Medicine, Denver

May, XIV, No. 5

63 Postoperative Paralytic Ileus; Report of Cases. O. S. Fowler, Denver.—p. 128.
64 Tuberculosis of Retinal Vessels with Recurring Hemorrhages and Proliferating Retinitis. F. R. Spencer, Boulder.—p. 134.

Indiana State Medical Association Journal, Fort Wayne

May, X, No. 5

65 Why Belong to Medical Society? G. F. Keiper, Lafayette.—p. 181.
66 *Conservatism in Cesarean Section. J. W. Shafer, Lafayette. —p. 186.
67 Relation of Cow's Milk to Human Tuberculosis. W. Shinar, Indianapolis.—p. 193.

66. Abstracted in THE JOURNAL, Oct. 21, 1916, p. 1250.

Journal-Lancet, Minneapolis

May 15, XXXVII, No. 10

68 Omentum; Its Physiologic Value and Need of Its Preservation. C. H. Mayo, Rochester.—p. 321.
69 Clinical Signs in Diagnosis of Obscure Forms of Syphilis of Nervous System. A. S. Hamilton, Minneapolis.—p. 324.
70 Artificial Vagina. J. E. Engstad, Minneapolis.—p. 329.
71 New Methods of Operating for Difficult Herniae. A. T. Mann, Minneapolis.—p. 331.
72 Duty of Physicians and Enforcement of Law in Minnesota in Relation to Reporting Births. G. C. Pierson, St. Paul.—p. 337.

June 1, No. 11

73 *Abdominal Surgery Under Local Anesthesia. R. E. Farr, Minneapolis.—p. 353.
74 Duodenal Diverticula; Report of Case Associated with Duodenal Ulcer. H. P. Ritchie, St. Paul, and G. L. McWhorter, Minneapolis.—p. 361.
75 Recent Advances in Knowledge of Active Constituent of Thyroid; Its Chemical Nature and Function. E. C. Kendall, Rochester.—p. 366.
76 *Histopathology of Autonomic System in Goiter. L. B. Wilson, Rochester.—p. 368.
77 *Tuberculosis of Spine; End Results of Operative Treatment. M. S. Henderson, Rochester.—p. 371.

73 and 77. Abstracted in THE JOURNAL, Dec. 2, 1916, p. 1694.
76. Abstracted in THE JOURNAL, Nov. 25, 1916, p. 1625.

Kansas Medical Society Journal, Topeka

May, XVII, No. 5

78 Perversions of Metabolism; Consideration of Causes, Effects and Treatment. H. J. Stacey, Leavenworth.—p. 122.
79 Infantile Diarrhea. M. Hahn, Arkansas City.—p. 127.
80 Case of Hypertrophied Prostate. T. G. Orr, Rosedale.—p. 130.

Laryngoscope, St. Louis

April, XXVII, No. 4

81 Index-Medicus and Digest of Otolaryngology for 1916.

Maine Medical Association Journal, Portland

May, VII, No. 10

82 Fractures of Spine. E. G. Abbott, Portland.—p. 307.
83 Necrology. W. P. McIntosh.—p. 319.

Medical Record, New York

May 26, XCI, No. 21

84 Maternity Insurance as Means to Lessen Disease and Death Rate of Mothers and Children. S. A. Knopf, New York.—p. 881.
85 Histopathologic Findings in Two Cases of Subacute (Combined) Cord Degeneration. G. B. Hassin, Chicago.—p. 885.
86 Epidemic Nasal Sinusitis; "Influenza" and "Grippe" Its Misnomers. J. J. Hurley, Boston.—p. 890.
87 Retinal Manifestations of Chronic Bright's Disease. G. W. Vandegrift, New York.—p. 893.
88 Some Quondam Conceptions Pertinent to Otorhinology. J. A. Hagemann, Pittsburgh.—p. 895.
89 Damaged Goods. M. H. Cazier, New York.—p. 897.

New York State Journal of Medicine

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90 Diagnosis and Choice of Operation in Certain Affections of Stomach and Duodenum. J. M. T. Finney, Baltimore.—p. 203.
91 Modern Hospital; Its Form, Function and Work. H. A. Christian, Boston.—p. 210.
92 Irreducible Minimum of Care and Asepsis in Every-Day Obstetrics in Tenements. J. W. Markoe, New York.—p. 214.
93 Cooperation in Medicine. M. B. Tinker, Ithaca.—p. 218.

Nebraska State Medical Journal, Norfolk

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94 Blood Transfusion. J. S. Welch, Lincoln.—p. 277.
95 Choice of Donor in Blood Transfusion. G. W. Covey, Lincoln. —p. 280.
96 Public School in Relation to Epidemics. J. M. Patton, Omaha. —p. 281.
97 Two Cases of Surgical Infantile Paralysis. H. W. Orr, Lincoln. —p. 285.
98 Case of Jaw Fracture, Treated by Means of Interdental Splint. C. H. Breuer, Lincoln.—p. 289.
99 Health Work and Rural Sanitation. C. F. Chapman, Lincoln.—p. 295.
100 Epidemiology of Anterior Poliomyelitis. M. W. Richardson.—p. 297.

New York Medical Journal

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101 Ductless Glands in Cardiovascular Diseases and Dementia Praecox. C. E. de M. Sajous, Philadelphia.—p. 961.
102 Vegetative Nervous System and Dementia Praecox. S. E. Jelliffe, New York.—p. 968.
103 Truth About Electrotherapeutics. W. L. Clark, Philadelphia.—p. 971.
104 Six Cases of Dysphagia and Dysphonia of Dental Origin. T. J. Harris, New York.—p. 975.
105 Surgical Aspects of Male Sterility. A. L. Wolbarst, New York. —p. 976.
106 Treatment of Diseased Nasal Sinuses and Ears by General Practitioner. W. Ferguson, New York.—p. 979.

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107 Constructive Health Program for Urban Schools. I. H. Goldberger, New York.—p. 982.
108 Mercuric Chlorid Test for Diagnosis of Syphilitic Infection. E. G. Birge, Jacksonville, Fla., and J. R. Bean, Birmingham, Ala.—p. 986.
109 Statistical and Clinical Survey of Five Hundred and Ninety-One Genito-Urinary Cases. A. Strachstein, New York.—p. 986.
110 Pyloric Obstruction and Thymus Disease in Infant. R. L. Pitfield, Philadelphia.—p. 988.

Pennsylvania Medical Journal, Athens

May, XX, No. 8

111 *Habitual Dislocation of Ulna; Report of Case. M. Behrend, Philadelphia.—p. 533.
112 Limitations and Advantages of Localized Anesthesia. H. F. Smith, Harrisburg.—p. 535.
113 *Closure of Fecal Fistula by Extraperitoneal Method. C. F. Nassau, Philadelphia.—p. 539.
114 Relation of Rectum to Functional Abdominal Disturbances. E. Laplace, Philadelphia.—p. 540.
115 Chronic Ulcer of Stomach and Duodenum; Study of Twenty-Five Operative Cases. H. B. Gibby, Wilkes-Barre.—p. 542.
116 *Cooperation of Physician and Surgeon in After-Treatment of Patients Operated on for Diseases of Gastro-Intestinal Tract. E. H. Goodman and J. Speese, Philadelphia.—p. 546.
117 Hydrophthalmos; Report of Case. H. M. Becker, Danville.—p. 549.
118 Diagnosis and Treatment of Chronic Intestinal Indigestion in Children. R. K. Rewalt, Williamsport.—p. 551.

111. **Habitual Dislocation of Ulna.**—Behrend cites a case in which in certain movements the ulna would be dislocated about three-fourths inch posterior. The author remedied this condition as follows: A one-fourth inch incision was made over the styloid process of the ulna, a drill used to bore a hole transversely through the ulna and radius, and a ten-penny wire nail hammered into the opening made by the drill. Great care was exercised to avoid entering the joint. While this operation fixes the ulna to the radius, as a matter of fact normally the extreme lower portions of the ulna and radius move more slightly in pronation and supination. In Behrend's case motion has been very little interfered with. Pronation is perfect but supination cannot be completely performed. The patient has good use of his arm and has returned to his original occupation, that of chauffeur. A point of considerable interest is the fact that the anatomic relations have been preserved.

113. **Closure of Fecal Fistula by Extraperitoneal Method.**—Nassau dissects the abdominal wall away from and close to the fistula layer by layer. A circular incision is made close around the fistulous tract, very much in the same way as one circumscribes the tract of a fistula in ano. Under ideal conditions, after going through the edges of the retracted muscular layer, one comes down on a layer consisting of the following fused structures: transversalis fascia, parietal peritoneum and the peritoneal covering of the bowel. When the operation has gone nicely, sometimes a little cone-shaped process of cecum can be pulled up into the wound, without having opened into the general peritoneal cavity. The fistula is now amputated in exactly the same way that one deals with an appendiceal stump. The tract is crushed and tied off close to the bowel wall. This small area of the wound is wiped out with a little pure alcohol on a sponge. The essential part of the operation is the folding in of the wall of the bowel by row after row (usually three rows being employed) of a No. 0 chromicized catgut suture.

116. Abstracted in THE JOURNAL, Oct. 14, 1916, p. 1181.

Public Health Journal, Toronto

May, VIII, No. 5

119 Birth Control in Its Medical, Social, Economic and Moral Aspects. S. A. Knopf, New York.—p. 117.
120 Life in Lumber Camps of Northern Saskatchewan. J. H. Symons.—p. 136.

South Carolina Medical Association Journal, Greenville

May, XIII, No. 5

121 Necessity of Routine Genito-Urinary Examinations in Practice of Medicine and Surgery. M. Weinberg, Sumter.—p. 536.
122 Health Education in Rural Districts. L. A. Riser, Columbia.—p. 538.
123 Psychiatry and General Practitioner. W. C. Sandy, Columbia.—p. 540.
124 Report of Series of Three Hundred Cataract Operations. C. W. Kolleck, Charleston.—p. 544.
125 Presenting Symptoms in Three Hundred Consecutive Cases of Syphilis. R. H. Lafferty and S. R. Thompson, Charlotte, N. C.—p. 548.
126 Exophthalmic Goiter. S. O. Black, Philadelphia.—p. 551.
127 Diverticulitis of Appendix. J. H. Taylor, Columbia.—p. 555.

Southwest Journal of Medicine and Surgery, El Reno, Okla.

May, XXV, No. 5

128 Involvement of Central Nervous System in Primary and Secondary Stages of Syphilis. D. D. Paulus, Oklahoma City.—p. 113.
129 When Is Curettage of Uterus Justifiable in Obstetric Practice and How to Do It. J. W. Wilhoit, St. George.—p. 122.
130 Operation on Uterus. H. A. Lowe, Springfield, Mo.—p. 129.
131 Influence of Build on Longevity. W. M. Brumby, Waco, Texas.—p. 132.

Surgery, Gynecology and Obstetrics, Chicago

June, XXIV, No. 6

132 *Transplantation of Ureter Following Traumatism and Resection of Bladder for Cancer. E. S. Judd, Rochester, Minn.—p. 635.
133 Some Aspects of Renal Surgery. J. B. Squier, New York.—p. 641.
134 *Surgical Treatment of Benign Neoplasms of Bladder. E. Beer, New York.—p. 646.
135 Id. E. Martin, Philadelphia.—p. 648.
136 Diagnosis of Ureteral Diseases with Their Surgery. B. Lewis, St. Louis.—p. 649.
137 Infections of Bladder with Special Reference to Localized Resistant Areas of Cystitis. J. T. Geraghty, Baltimore.—p. 655.
138 *Bladder Changes Due to Lesions of Central Nervous System. J. E. Burns, Baltimore.—p. 659.
139 Early Diagnosis of Renal Tumor; Report of Five Cases. F. Hinman, San Francisco.—p. 669.
140 *Tuberculosis of Thyroid. R. E. Mosiman, Cleveland.—p. 680.
141 Partial Gastrectomy in Treatment of Chronic Indurated Ulcers of Stomach. L. Sierra, Santiago, Chile.—p. 694.
142 Congenital Radio-Ulnar Synostosis. W. W. Feidt, Minneapolis.—p. 696.
143 *Growth of Free Bone Transplants. T. Todyo, Seattle.—p. 701.
144 Congenital Genu Recurvatum. L. D. Prince, San Francisco.—p. 714.
145 Acute Inflammation of Neck of Femur; Report of Three Cases. J. E. Moore, Minneapolis.—p. 725.
146 *Results of Surgical Treatment of Gastric Ulcer. D. C. Balfour, Rochester, Minn.—p. 731.
147 General Rules Used in Simple Plastic Work on Austrian War Wounded Soldiers. J. F. S. Esser, Arnhem, Holland.—p. 737.
148 Free Muscle Tendon Bone Transplantation for Old Fracture of Patella. W. M. Brickner, New York.—p. 749.
149 Vertebral Fracture with Luxation, Transplantation of Bone. H. P. Cole, Mobile, Ala.—p. 751.

132. Abstracted in THE JOURNAL, Jan. 27, 1917, p. 308.

134. **Surgical Treatment of Benign Vesical Neoplasms.**—Beer again places emphasis on the fact that all benign papillomata that are suitable cases for cystoscopic high frequency cauterization—and these constitute the great majority—can be definitely cured by this method. Those few cases that cannot be so treated must be operated on and usually will be cured definitely, if the Paquelin cautery technic outlined by him is followed. The important features of this new technic are mainly directed against the danger of breaking off pieces of viable growth which may lead to recurrences. For this purpose the intravesical operation is done entirely with the Paquelin (hooked point) cautery, the bladder is not filled with fluid before opening it, the incision in the bladder is gradually enlarged without any sponging or any rough handling and each tumor as it presents is burned to a crisp, every suspicious spot in the bladder is burned, and the edges of the opening in the bladder are similarly treated. Finally the whole operative field is thoroughly soaked in alcohol to destroy any particles of viable growth that might have accidentally broken off during the manipulations. The Paquelin may be so used within the bladder for the greater part of an hour without causing any more postoperative discomfort than is usually seen after a suprapubic cystostomy.

138. **Bladder Changes Due to Lesions of Central Nervous System.**—The chief changes in the bladder due to lesions of the central nervous system, according to Burns, consist in diminution in the tone of its musculature and that of the internal vesical sphincter. As a result of such loss of tonicity, there is often a gradual accumulation of residual urine and in some instances a dilatation of the bladder. Incontinence occurs in a large majority of the cases. In cases in which this exists there is a dilatation of the internal vesical sphincter and a funnel-shaped posterior urethra which is readily

demonstrated cystoscopically and roentgenographically. The incontinence may be a true paradoxical incontinence due to the gradual accumulation of residual urine and overdistention of the bladder, or it may be due directly to a relaxation of the internal vesical sphincter and the neighboring urethral muscles. In the latter type there is usually no residual urine present. The trabeculation of the bladder wall, although generally present, seems to be rather inconstant in its distribution. The trigon is usually found to be atrophic. The cystoscope as a rule can be drawn into the posterior urethra and the verumontanum and intra-urethral portions of the lateral lobes of the prostate easily seen. The most effectual form of treatment in these cases consists of intravenous and intraspinal therapy combined with dilations of the urethra. This has been carried out in twenty-one cases (the histories of nine of these cases are detailed), when the lesion of the central nervous system was due to syphilis. Of the twenty-one cases, sixteen gave a history of previous syphilitic infection, seven had a positive blood Wassermann on admission and in fourteen the blood Wassermann was negative. The spinal fluid Wassermann was positive in twenty of the cases on admission, and in nine is negative at the present time. Nineteen of the cases had intraspinal treatment, in seven of these it was combined with intravenous therapy and in eight with dilations of the urethra. In one case intravenous treatment alone was given.

140. **Tuberculosis of Thyroid.**—Nine cases are reported by Mosiman. The age incidence of the nine cases was 33 years, the youngest being 18 years and the oldest (patient with malignancy and tuberculosis) 60 years. The average duration of goiter was fifteen months; the longest duration of goiter was sixteen years. One patient had not noticed goiter at all. Nervousness was complained of by seven patients, the shortest duration being two months and the longest seven and one-half years. Seven patients complained of palpitation; three had dyspnea, one having had it for eight years. Two patients had exophthalmos; two gave a history of tuberculosis; and three had pleurisy. Fainting spells had been present in three cases. On physical examination, six patients had enlarged hearts; one had a friction rub at the left lower back; two had exophthalmos; seven had a marked tremor; and six showed a loss of weight during the past year. The average blood pressure of the nine cases, on admission, was 145 millimeters mercury; on discharge was 129 millimeters of mercury. Four patients had had treatment (?); two had had rest; one had had digitalis; and three had had iodin, in one case applied locally.

The operation on all patients was a partial resection of the right, median, and part of the left lobes of the thyroid gland. Two patients had a ligation of one of the superior thyroid arteries, this giving an index of the clinical severity of the disease. All but two of the cases were diagnosed clinically as "exophthalmic goiter." One case was diagnosed "sarcoma," clinically. One case "hypertonus." In no case was tuberculosis of the thyroid gland mentioned in the clinical diagnosis, nor was tuberculosis suspected in the gross specimen after operative removal.

143. **Growth of Free Bone Transplants.**—Todyo's investigation has convinced him that the aperiosteal transplant grows and regenerates by the proliferation of cells in the subperiosteal layer. But in such a case the new growth of bone is not so active as in the transplants with periosteum. The aperiosteal transplant acquires a new periosteum.

Todyo says that the aim of the bone transplantation can be reached without the periosteum and marrow of the recipient. As to the continued life of the transplanted bone, however, he cannot give a definite opinion at this time. Transplanted bone grows; the increase in thickness is marked, although the length increases but little even when transplanted with the epiphyseal line.

146. **Results of Surgical Treatment of Gastric Ulcer.**—The conclusions drawn by Balfour are based on 677 gastric ulcers operatively demonstrated in the Mayo Clinic during the past ten years. He says that for ulcers at the pylorus, posterior gastro-enterostomy is the operation of choice in the poor surgical risk, for although pylorectomy is followed by better results, the operative mortality is distinctly higher. The cautery is a useful adjunct in selected cases. For ulcers on the lesser curvature, cautery by the method described in a previous paper and gastro-enterostomy is the operation of choice. Local excision alone of such ulcers is inadequate, 32 per cent. of patients so operated on ultimately requiring further operative treatment, viz., gastro-enterostomy. Sleeve or segmental resection, especially in large high ulcers and hour-glass contraction in suitable cases is not only a relatively safe operation but has been followed by good results. The lowest operative mortality in the more common operations was associated with cautery and posterior gastro-enterostomy. Ulcers on the posterior wall are associated with the highest operative risk, while those at the pylorus are of least risk.

Vermont Medicine, Rutland

May, II, No. 5

150 Opportunity and Medical Research. J. S. Horner, West Pawlet. —p. 113.

151 Peroral Endoscopy; Report of Two Cases. W. G. Ricker, St. Johnsbury.—p. 119.

West Virginia Medical Journal, Huntington

May, XII, No. 11

152 Causes and Treatment of Arteriosclerosis. C. O. Grady, Charleston.—p. 398.

Wisconsin Medical Journal, Milwaukee

May, XV, No. 12

153 Results of Treatment in Hodgkin's Disease. J. L. Yates, Milwaukee, and C. H. Bunting, Madison.—p. 453.

154 Pott's Disease; Diagnosis and Treatment by Bone Transplant Method. F. J. Gaenslen, Milwaukee.—p. 463.

155 Echinococcus Infections; Report of Cases. S. Cahana, Milwaukee. —p. 468.

156 Acute Perforating Ulcer of Stomach and Duodenum. J. P. Connell and P. J. Colvy, Fond du Lac.—p. 470.

157 Treatment of Wounds and Infections. G. E. Seaman, Milwaukee. —p. 472.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 12, I, No. 2941

1 Restricted Supply of Food; Its Relation to Health and Efficiency. M. S. Pembrey.—p. 605.

2 Three Common Intestinal Entamebae of Man, and Their Differential Diagnosis. C. Dobell and M. W. Jepps.—p. 607.

3 Postoperative Tympanites; Its Nature and Some Points in Treatment. J. D. Malcolm.—p. 612.

4 Two Cases of Pregnancy Complicated by Myoma Uteri. J. B. Hellier.—p. 614.

5 Technic of Cesarean Section. E. F. Neve.—p. 615.

6 Gonorrhea Treated by Electrolysis; New Electrolyte. C. Russ.—p. 616.

7 Therapeutic Effects of Colloidal Preparations. M. Morris.—p. 617.

Journal of Tropical Medicine and Hygiene, London

May 1, XX, No. 9

8 Case of Urinary Amebiasis in Anglo-Egyptian Sudan. A. J. Chalmers and W. R. O'Farrell.—p. 97.

Lancet, London

May 12, I, No. 4889

9 Gunshot Wounds of Joints, Their Pathology and Treatment. F. Cook.—p. 711.

10 Direct Transfusion of Blood. A. Fullerton, G. Dreyer and H. C. Bazett.—p. 715.

11 Fragment of Shell Embedded in Internal Popliteal Nerve. J. M. Davidson and P. Lockhart-Mummery.—p. 719.

12 Oculopalpebral Prothesis. A. M. Ramsay.—p. 721.

13 Surgical Correction, without Cicatrix, of Unlovely Noses. J. Bourguet.—p. 722.

14 Easily Improvised and Effective Method of Obtaining Plate Cultures of Anaerobes. W. J. Wilson.—p. 724.

15 New Bone Clip for Treatment of Fractures of Long Bones. J. E. Adams.—p. 725.

16 Question of Economy in Food. M. S. Pembrey.—p. 732.

Medical Journal of Australia, Sydney

April 14, I, No. 15

17 Work of Casualty Clearing Station. A. L. McLean.—p. 309.

18 Importance of Early Diagnosis in Pulmonary Tuberculosis from Public Health Point of View. A. Stewart.—p. 312.

April 21, No. 16

19 Limitations of Antiseptic Method, Especially in Relation to Burns and Scalds. A. C. F. Halford.—p. 329.
20 Cerebrospinal Fever, 1916. C. A. Stewart.—p. 333.

April 28, No. 17

21 War Surgery at Front. C. MacLaurin.—p. 351.
22 Cesarean Section in Infective Cases and Value of Adequate Drainage. W. A. Verco.—p. 353.
23 Case of Poisoning by Hydrocyanic Acid Gas. A. M. McIntosh.—p. 355.

Lyon Chirurgical

January-February, XIV, No. 1, pp. 1-212

24 *Early Secondary Suture of War Wounds. L. Tavernier.—p. 1; B. Desplas and A. Policard.—p. 12.
25 *Primary Suture of War Wounds. A. Chalier.—p. 35.
26 *Latent Microbian Infection of Wounds After Healing. (Tolerance du tissu de bourgeonnement des plaies de guerre en voie de cicatrisation pour des corps étrangers de dimensions microscopiques.) A. Policard and B. Desplas.—p. 49.
27 *Treatment of Shock in the Severely Wounded. P. Santy.—p. 54.
28 Restoration of Penis After War Wounds; Four Cases. Rochet and Richer.—p. 63.
29 Arthrotomy with Immediate Suture for Certain War Wounds of the Knee. H. Gaudier and R. Montaz.—p. 77.
30 *Wounds of the Knee: Thirty-Three New Cases. J. Bosquette and P. Moulonguet.—p. 100; Fifty-Two Cases. W. H. Ogilvie. p. 134. With Fracture of the Patella; Eleven Cases. V. Combier and J. Murard.—p. 156; Keeping Wounded Knee at Right Angle Facilitates Drainage. J. Ducuing.—p. 179.
31 Prophylaxis and Treatment of Chronic Osteitis and Fistulas. L. Desgouttes.—p. 202.

24. **Early Secondary Suture of Wounds.**—Tavernier remarks that Carrel's publications on the treatment of war wounds have focused attention on Dakin's neutral solution of chlorinated soda more than on the early suturing, while the latter is in reality the essential element of his method. It used to be restricted to exceptional cases, and Carrel's innovation is its general use. Tavernier soon became convinced that when the wound was once thoroughly cleared out, it made little if any difference whether it was irrigated or not, and hence he suppresses the continuous irrigation entirely as a rule. It keeps the bed wet, and requires constant surveillance and frequent dressings. All this is avoided by surgical cleansing of the wound, cutting away all bruised tissues and making an opening for drainage at the lowest point. All splints of bone are removed unless solidly adherent; pseudarthrosis is rare after subperiosteal removal of sequesters. If important nerves have been severed, they are sutured at once. In this case he refrains from iodin, but otherwise swabs out the wound lightly with it. After a day without fever the dressing is removed and, if the aspect of the wound is satisfactory, it is sutured. The stitches may even be taken at the first intervention; they are ready then to be drawn up and tied. He regards the outcome in his seventy-nine cases as very satisfactory. There was only one case in which a severe infectious focus developed after the suture.

25. **Primary Suture of War Wounds.**—Chalier has discarded antiseptics, etc., and now relies on operating so early that infection has not had time to develop, clearing out the focus so thoroughly that there are no appreciable sources of infection left. Under this mechanical-surgical asepsis, he sutures at once, in several tiers. The wound not only heals promptly but the healing is ideal. Constant supervision is necessary, however, ready to open up the wound again if symptoms develop.

26. **Repair of War Wounds.**—Policard and Desplas reiterate that the primary surgical clearing out of the wound is the main thing, then watching for the earliest moment when it is safe to suture. This waiting period is shorter the more thoroughly the wound has been cleaned out. They call attention to microscopic foreign bodies that may be left in wounds healing apparently aseptically. These explain the sudden relapses of infection later sometimes observed, and they teach the necessity for more thorough primary clearing out of the depths of the wound.

27. **Treatment of Shock from War Wounds.**—Santy has found initial shock rare; the shock after hemorrhage is induced by the cold, the carrying and the pain. He treats it by placing the man, stripped, on an operating table, the head low to combat the anemia of the medulla oblongata, and then applies a tent with heated air entering at the foot to warm him thoroughly. The blood pressure is raised by intravenous injection of 500 c.c. of saline at 104 F., containing 0.25 mg. epinephrin. This intravenous injection is repeated every six hours during the first twenty-four in case of severe shock, but the other doses should be only 250 c.c. The recuperation is remarkably prompt and complete when these simple measures can be applied early, before the actual posthemorrhage shock. The shock thus conquered, at once permits prompt operation on the wounds. The advanced posts should be equipped for combating shock and operating for all the more serious wounds.

30. **Wounds of the Knee.**—Ducuing gives illustrations showing the better facilities for draining after resection of the knee when it is kept flexed at a right angle. This keeps the space back of the femur effectually drained.

Presse Médicale, Paris

April 19, XXV, No. 23, pp. 233-240

32 *Writing That Can Be Read by Blind and Seeing. (Typhlographie en caractères usuels.) A. Cantonnet.—Title page.
33 Wounds of Pleura and Lung. V. Pauchet.—p. 233.
34 Vaccine Treatment in Certain Cases of Chronic Enteritis. A. Berthelot.—p. 235.

32. **Writing for the Blind and the Seeing.**—Cantonnet's ruler with slits is illustrated. The method of using it was described in THE JOURNAL, May 19, p. 1511.

Progrès Médical, Paris

April 28, XXXII, No. 17, pp. 139-148

35 *Treatment of War Deafness. J. Baratoux.—p. 139.
36 Latent Aneurysms in the Wounded Revealed by Radioscopy. H. Lebon.—p. 143.
37 *Agricultural Colleges for Girls. A. Satre.—p. 144.

35. **War Deafness.**—A number of devices are illustrated that have proved their usefulness in reeducating the hearing apparatus after deafness from concussions, etc. The chief of the service relates that when the hearing has been entirely lost, the men learn lip reading so readily that in three months they are as expert at it as the congenitally deaf after eight years of training.

37. **Agricultural College for Girls and Women.**—Satre describes the successful schools for girls in Russia where they are said to be trained in everything that the wife and daughter of a farmer should know to aid in carrying on the farm. The courses are one or two years long in some, but the Tchernigov school is a training school for well-to-do farmers' daughters. They are admitted at the age of 13 and get their diploma at 17. In France there are schools for dairy work and bee culture, but none as yet that prepare for all the duties of a farmer's wife.

Revue de Chirurgie, Paris

Sept.-Oct., 1916 (Published March, 1917), XXXV, No. 9-10, pp. 545-693

38 *War Wounds of Foot and Ankle. E. Quénu.—p. 545. To be continued.
39 Treatment of Wounds and Fractures of Joints; One Hundred Cases. J. Gatellier.—p. 573. To be continued.
40 *Primary Suture of Fractured Long Bones. (De l'ostéosynthèse primitive dans les fractures diaphysaires par projectiles de guerre.) P. Bonnet.—p. 546.
41 *Present Status of Treatment of War Wounds. E. Marquis.—p. 584.
42 *Malaria and Traumatism in the Wounded in the Near East. L. Moreau.—p. 604.
43 *Postoperative Jaundice Terminating Fatally. (L'hépato-néphrite chloroformique sans azotémie.) N. Fiessinger and E. Montaz. p. 624.
44 War Wounds of Blood Vessels Without Hemorrhage. (Les plaies vasculaires sèches.) J. Fiolle.—p. 644.
45 Extraction of Projectiles Under Intermittent Screen Control. R. Toupet.—p. 662.

38. **Wounds of the Foot and Ankle.**—Quénu's study is based on 300 cases personally observed. This instalment of his report fills nearly a hundred pages and is accompanied by 141 illustrations.

40. **Consolidation by Primary Intention with War Fractures of Long Bones.**—Bonnet relates that when it was possible to

operate in the first hours after the injury, he was able to insure healing by primary intention in the seven cases reported. He systematically cleared out all the sequesters and sutured the fracture, and the coaptation thus realized resulted in prompt repair. The humerus, forearm and femur were the bones involved.

41. **Present Status of Treatment of War Wounds.**—Marquis as consulting surgeon has had opportunity to compare the results of the different methods of managing wounds now in vogue. They all teach, he emphasizes, the necessity for extremely early surgical intervention and the usefulness of primary resections within certain limits. Also that primary suture should not be attempted unless the surgeon is certain of his asepsis and when the patient can be kept till cured. Otherwise not. Thirdly, he emphasizes the fine results of what he calls the primo-secondary suture, done from the sixth to the fifteenth day. To realize this, we can use the Carrel method but, when this is impracticable, a 12.1 per cent. solution of magnesium chlorid can be used for rinsing and dressing the wound. His final conclusion is that during a battle, when the wounded are arriving in large numbers, none of the above measures can be applied. The choice of treatment then is between a 14 per cent. solution of sea salt and Mencière's balsam method. These have proved their usefulness for recent wounds. (The latter was described in these columns, April 28, 1917, p. 1294.)

42. **Malaria in the Troops in the Near East.**—Moreau states that nearly all the wounded that have returned to France from the campaigns in Macedonia, Serbia and the Dardanelles have had attacks of malaria since their return. Their wound reduced their resisting powers so that the malaria flared up again in those who had had it once, and it broke out for the first time in those who had been inoculated with the virus but their resisting powers had kept it latent.

43. **Injury of the Liver from Chloroform.**—Fiessinger and Montaz call attention to the toxic action of chloroform on the liver, which, they declare, is becoming more and more apparent. In a case described, with the necropsy findings, a previously healthy young man developed intense jaundice and albuminuria, and collapsed in three days after a third operation under chloroform. A total of 40 gm. of chloroform had been used in all. There was no uremia or hemorrhage, but necropsy revealed a pseudo-nutmeg liver, injury of the suprarenals and massive degenerative nephritis of the convoluted tubules. The findings indicated that the liver was first affected, and that toxic action from this injured the kidneys. This case and analogous experiences that have been reported by others teach that chloroform should never be used when the liver is known to be below par.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 28, XLVII, No. 17, pp. 513-544

46 *Therapeutic Iontophoresis. H. Koller.—p. 513. Commenced in No. 16, p. 485.
47 Inhalation of Dust in Metal Grinding. (Zur Pneumonokoniose der Metallschleifer.) H. Wegmann.—p. 526.

46. **Iontophoresis of Heavy Metals.**—Koller explains that the technic and application of medical ionization have been worked out almost exclusively by ophthalmologists since the publications of Leduc and Frankenhäuser, 1900-1907. He describes extensive experiments he has been making with the ions of the heavy metals, passing them through dead animal membranes and in experiments on rabbits' ears, and refers to a recent work in this line by E. Sturridge in a dental journal. The results of Koller's research warn against the use of zinc and copper salts on a large surface as, for example, in the vagina, but silver, he asserts, is peculiarly adapted for IPH. The chlorids which silver forms in the body are insoluble and hence not toxic. The evidence presented seems to show that heavy metals in ion form can penetrate into and pass along in the body, but they are kept from doing harm by an antibody, an actual anti-ion colloid. At the moment of the discharge (*Entladung*), however, the ion becomes active and by forming salts induces precipitation of the colloid, that is, it exerts a caustic action. The process is not restricted to the electrode but occurs throughout the body wherever the metal ions happen to be at the time. The ideal therapeutic condition would be if this precipitation could occur only with the especially susceptible bacterial albumins, thus leaving the therapeutic action without injurious by-effects on the organism. When there is a general precipitation of colloid, in the course of mercury or silver treatment, then we have the dread symptoms of general intoxication. If we can master the conditions regulating the migration and discharges of the heavy metals in the body, promising vistas open for therapeutics.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 18, XXXVIII, No. 22, pp. 337-352

48 Abscess in Frontal Lobe from Overlooked Scrap of Shell. Recovery. G. Aperlo.—p. 337.

March 25, No. 24, pp. 369-383

49 *Suture of Diaphragm After War Wound. O. Ortali.—p. 369.

49. **Suture of the Diaphragm.**—Ortali expatiates on the difficulty of diagnosing a wound of the diaphragm on account of the disturbances from injury of organs near by and from viscera forming hernia through the gap as in a case reported. The slit in the diaphragm in his case was 4 inches long, but the bullet had not injured any organ in its passage through the seventh left interspace. He resected a rib, thus obtaining access to the diaphragm, and easily reduced the omentum and colon, and sutured the diaphragm, with prompt recovery.

Policlinico, Rome

April 29, XXIV, No. 18, pp. 569-608

50 *Present Status and Importance of Roentgen Examinations in Military Surgery. P. Masserini.—p. 569; (Profondimetro Luisada-Toccafondi.) E. Luisada.—p. 588; (Brevi considerazioni sulla ricerca radioscopica dei proiettili.) F. Leocata.—p. 590; (Dopo un anno di lavoro.) E. Grego.—p. 592.
51 Modification of the Excursions of the Diaphragm After Perforation by Bullet. G. Ceresole.—p. 580.
52 Roentgen Localization of Needle Entering at Buttocks. F. Ghilarducci.—p. 584.
53 Technic for Roentgen Stereoscopy. G. C. Trabacchi.—p. 586.

50. **Medical Radiology.**—This entire number of the *Policlinico* is devoted to experiences with Roentgen examination for various purposes, mostly on the firing line. A number of special technical points are described and the difficulties under certain conditions are emphasized. Grego presents what he calls the technical balance sheet, the scientific, the economic and the moral balance sheets from his year's work with a Roentgen ambulance. He insists that radiography, not radioscopy, should be the reliance, and expatiates on the advantages of its more general use close to the firing line.

Riforma Medica, Naples

April 14, XXXIII, No. 15, pp. 393-420

54 Antituberculosis Dispensaries. A. Pirera.—p. 393.
55 *Influence of Various Chemicals on Transplanted Tumors in Hens. F. Pentimalli.—p. 396.
56 Intravenous Injection of Colloidal Gold in Typhoid. R. Massalongo and S. Vivaldi.—p. 397. To be continued.
57 Hard Edema in the Joints from Long Continued Industrial Injury. (Della cellulo-dermite auto-contusiva degli arti.) A. Mori. p. 402. Commenced in No. 14, p. 371.
58 Present Status of Mitral Infantilism. L. Ferrannini.—p. 410.

55. **Action of Chemicals on Sarcoma in Fowls.**—Pentimalli added various chemicals to the suspension of the sarcoma tissue before inoculating the fowls. The tumors failed to grow when chloroform-toluol, hydrochloric acid, potassa, acetone, mercuric chlorid, formaldehyd or iodin had been added to the suspension in a minute amount. But the tumors developed as usual when toluol alone, a lipoid extract of the pyocyaneus, neosalvarsan, crystal violet or various salts of sodium with tartaric acid were used. Antimony and potassium tartrate seems to be the only one of the chemicals used which prevented the development of the tumor in a dose such as the fowl could bear. This drug is being used extensively in treatment of leishmaniosis, and the experiments related here suggest that further research in this line might give interesting results. With a proportion of 1:300 and 1:500, no tumors developed, but at 1:700 and 1:900 the inoculation with the tumor suspension gave positive results.

Cronica Medica, Lima, Peru

April, XXXIV, No. 646, pp. 117-148

59 *Vaccine Therapy of Typhoid Fever. L. H. Mejia.—p. 120.
60 *Hemiplegia Following Typhus. E. Odriozola.—p. 131.
61 *Double Lateral Colporrhaphy for Cystocele. C. T. Carvallo. p. 135.
62 Birth of Healthy Child at Term After Entire Cervix Had Sloughed Off in Previous Pregnancy. H. Larrabure.—p. 136.

59. **Vaccine Therapy of Typhoid.**—Mejia summarizes the experiences in this line of numerous clinicians as published in various countries, and reports excellent results in twenty-four cases personally observed, with recovery of all the patients. He used a vaccine sterilized by heat, and states that when there was a local or systemic reaction it was transient. The second or third day there was no further trace of by-effects while the general condition showed marked improvement.

60. **Hemiplegia Consecutive to Typhus.**—Odriozola's patient was a man of 27 who had had typhus between two and three years before. It had left him with left hemiplegia, complete, even including the face, but it has improved somewhat in the course of the years. Odriozola remarks that typhus is endemic in parts of Peru, and refers to the extra malignancy of a recent epidemic of it at Cerro de Pasco in which numerous employees of the Compañia Americana succumbed. Typhus does not exist at Lima, and cases brought there from the mountains usually lose their virulence and contagiousness. But this was not the case with the typhus patients from Cerro de Pasco; the disease ran an exceptionally severe course in them. The men were nearly all addicted to alcohol which possibly cooperated in the gravity of the disease.

61. **Double Lateral Colporrhaphy for Cystocele.**—Carvallo does not approve of the usual single median incision as this sacrifices the anatomic rhaphé of the vagina, while the bladder and the mucosa of the vagina at this point are so close together that it is difficult to avoid injuring the bladder during the incision. Repair afterward is liable to mishaps, for reasons which he enumerates. These disadvantages are all avoided by making two incisions, one on each side, respecting the median portion. After the operation there is support from the normal rhaphé and also from the strips of cicatricial tissue on each side. Fehling proposed this some years ago, Carvallo says, but he has found no reference to it since.

Prensa Medica Argentina, Buenos Aires

April 10, III, No. 31, pp. 329-339

63 Appendicitis from Maggots in the Intestine. (Miasis intestinal producida por larvas de la "Compsomyia macellaria.") S. E. Parodi and A. Saccone.—p. 329.
64 *Mental Disturbance with Heart Disease. M. R. Castex and J. C. Vivaldo.—p. 331. Commenced in No. 30, p. 317.
65 *Treatment of American Leishmaniosis of the Skin. A. Neiva and B. Barbara.—p. 334.
66 Painful Protracted Priapism. J. A. Esteves and R. Chiappori. p. 336. To be continued.
67 *The Oculocardiac Reflex. S. B. Amadeo.—p. 337. Commenced in No. 29.

64. **Mental Disturbances with Heart Disease.**—Castex and Vivaldo remark that the connection between heart disease and mental derangement is often overlooked. The specialists in heart disease pay little heed to the psychic sphere in the cases in which the psychic symptoms are mild and fleeting, and, on the other hand, when the mental disturbances predominate the psychiatrists ascribe slight importance to clinical study of the causal heart trouble. They report thirteen cases, grouping them as the endocarditis was of the acute recurring type or there was chronic valvular disease or asystole. The mental disturbances were most common with acute recurring endocarditis. They were undoubtedly the work of toxins on the brain. There was concomitant kidney trouble in nearly all, and the mental confusion, hallucinations, etc., were of the same type as in other general infections in which the heart is spared, but they are never so severe as in the endocarditis cases. The defective functioning of the pathologic heart is the principal predisposing cause for the toxic psychoses. In the three endocarditis cases necropsy showed no appreciable lesions in the brain. The mental confusion and delirium were of the infectious toxic character, hypochondriac depression alternating in one with periods of euphoria.

In three patients with aortic and one with mitral valvular disease, melancholia predominated in those of syphilitic origin and motor excitement in the others. The importance of conditions in the circulation as the main factor in the mental disturbances here is confirmed by the aggravation as the terminal phase approached. The brain already suffering from syphilis develops mental confusion, depression and hallucinations, with motor excitement, under the influence of the inadequate circulation. In two of the cases the mental as well as the physical condition improved under treatment, the attacks of depression or excitement subsiding. In five cases of asystole, two men improved under treatment so that they left the hospital in good condition. One had presented, on entering, melancholia, constant delirium and paroxysms of motor excitement, but no hallucinations. The other, a syphilitic, had vague hallucinations, vague delirious ideas, slight mental confusion and extreme depression. Both were men of 39. The international literature on the subject is reviewed and the data compared in detail with the types here presented.

65. **Tartar Emetic in Treatment of Superficial Leishmaniosis.**—Neiva and Barbara give an illustrated description of three cases in which systematic treatment with tartrate of potassium and antimony arrested the leishmaniosis of from nearly two to eight years' standing. They relate that when Vianna introduced this treatment in 1912 he used a 1 per thousand solution in 0.85 per cent. saline. Later he modified the dosage, obtaining the best results with a 1 per cent. solution in the same saline. The solution once prepared cannot be sterilized by heat, as otherwise it loses its therapeutic properties. It is sterilized merely by passing it through a Chamberland F or Berkefeld V filter. The patients bear it perfectly; caution seems to be required only with chronic kidney disease. The first dose is 5 c.c. of the 1 per cent. solution, the following ones 10 c.c., if the first is borne well, all intravenous. When well borne they can be given daily. Some patients have taken over 100 injections.

67. **The Oculocardiac Reflex.**—Amadeo gives the tracings from experimental research on the oculocardiac reflex, especially on anesthetized dogs. He also tabulates the results in 80 sick and well persons, including 50 whose pulse tracings were taken. The findings show that the oculocardiac reflex may vary not only from day to day but even from moment to moment in the same subject. It is impossible to be sure that the pressure applied is identical each time, which may influence the results. Of 12 tabetics tested, the reflex was normal in only 2, inverted in one and abolished in the others. In 3 patients with sclerosis in patches, the reflex was normal, as also in 6 of 16 pregnant women; it was abolished in 8 and inverted in 2. The reflex thus does not seem to have any decisive differential value.

Russkiy Vrach, Petrograd

XVI, No. 5, pp. 97-120

68 Pirogoff's Letters from Berlin, 1833-1835. S. Y. Shtraikh.—p. 97.
69 Present Status of Legislation on Public Health Matters in Russia. V. I. Razumovsky.—p. 102.
70 *Pathogenesis of Addison's Disease. A. I. Yushtchenko.—p. 105.
71 Etiology of Gas Phlegmon. A. E. and V. E. Burovikh.—p. 108. Commenced in No. 4, p. 84.
72 Action of Digitalis Ambigua on Isolated Heart and Blood Pressure. V. M. Sokoloff.—p. 114.

70. **Pathogenesis of Addison's Disease.**—Yushtchenko relates that he has encountered a number of cases in soldiers which would have been classed with the traumatic neuroses if it were not for the fact that the men presented certain symptoms which we are accustomed to encounter with Addison's disease, especially the pronounced bronzing. Analysis of the cases shows further a deficiency in the functioning of both parts of the suprarenals, but there are no manifestations of tuberculosis, no status lymphaticus, etc. The course of the affection also is comparatively light and several of the men have materially improved, while the trend in all

is upward. He kept the men on a vegetable or vegetable-milk diet, and gave subcutaneous injections of arsenic, with tepid baths and repose.

He thinks that these cases throw light on the pathogenesis of ordinary Addison's disease. Infection and phenomena connected with immunity may be predisposing causes, but physical and psychic trauma are the direct factors.

There is nothing surprising in assuming a psychic origin for hyposuprarenalism as we know the enormous influence of the mind on the functioning of the glands with either an internal or an external secretion. "It is especially liable with the suprarenals," he says, "on account of the developmental relations between them and the nervous system—the suprarenals being provided with nerves as no other organ in the body." His experimental and clinical experiences have convinced him that the task of the glands with an internal secretion is not the neutralizing of toxins, nor merely the whipping up or the holding back of the functioning of other organs. The task of the glands with an internal secretion is the regulation of the interchanges of the different elements of the organism, such as the albumin, the nucleoproteids, lipoids, etc. In short, their task is much like that of the glands with an external secretion, only that it is more diversified and more complex. He cites a number of metabolic experiments to sustain this assumption, among them the increased cholin and phosphoric acid content of the urine in some of the patients here described.

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

April 7, I, No. 14, pp. 1077-1172

73 Treatment of Sinus Thrombosis Complicating Suppurating Otitis Media. I. C. Henkes.—p. 1092.
74 Morbidity of the Personnel of Holland Railroad. J. E. C. Schook. p. 1103.
75 *The Question of Traumatic Neuroses as Illuminated by Experiences in the War. T. Kuiper.—p. 1106.

75. **Traumatic Neuroses.**—Kuiper describes the conflicting views and mode of treatment in respect to traumatic neuroses, especially in the soldiers of the different warring forces. Three conceptions prevail, that of the "organic" nature of the disturbances (Oppenheim); the "functional" nature (Charcot) and the "intellectual" nature (von Strümpell). Oppenheim describes the manifestations of *Erschütterung* or concussion of the nervous system as liable to include seven different types; pain in the region affected and efforts to keep the part still to prevent its hurting worse; 2, irritability, and other manifestations of changes in the psychic sphere; 3, headache and dizziness; 4, reflex epilepsy; 5, local muscular spasms; 6, manifestations suggesting neurasthenia, and 7, manifestations suggesting hysteria. Kuiper reviews and compares all the arguments for and against each of these conceptions, and the results of treatment based on each. He has been convinced by the experiences related that Oppenheim is right in assuming the continuity of the nervous system as a whole, so that the entire system, brain and all, suffers when part of it is violently jarred. The next step from accepting this assumption of molecular alterations, transmitted from periphery to brain, is to accept von Monakow's diaschisis theory, and then to assume that the diaschisis may make its influence felt on the glands with an internal secretion through the mediation of the nerves innervating them, as also on the muscles, through tonic, vasomotor, trophic and other influences from the sympathetic and autonomous nervous systems.

Svenska Läkaresällskapets Handlingar, Stockholm

March 31, XLIII, No. 1, pp. 1-344

76 Balance, Position and Automatic Movements at Rest and During Exercise. Physiologic and Unphysiologic Gymnastic Exercises. T. Resmark.—p. 1.
77 Intravenous Injection of Drug or Serum Below Tourniquet in Treatment of Localized Infectious Process. G. Nyström.—p. 185.

Ugeskrift for Læger, Copenhagen

April 12, LXXIX, No. 15, pp. 559-604

78 *Successful Removal of Pituitary Tumor. P. N. Hansen.—p. 559.
79 Antithyroidin in Therapeutics. A. Rahlff.—p. 566.
80 *The Adequate Protein Minimum in Dietaries. (Ernæringsspørgsmaalet.) M. Hindhede.—p. 571. Commenced in No. 13, p. 491.

78. **Pituitary Tumor.**—The first symptoms were those of atrophy of the optic nerve, beginning eight years ago. The right eye became totally blind by the end of the fifth year and the left visual field became contracted although the eye seemed otherwise sound except that the papilla was blanched. A pituitary tumor was surmised, and the patient kept under close observation, but there was no change for nearly three years. The man of 48 complained occasionally of headache. It lasted for an hour or two and was very severe. There was nothing to suggest venereal disease or abuse of alcohol, but roentgenoscopy showed the sella turcica twice the normal size. The tumor was removed by turning back the nose; it was a small-celled sarcoma. Recovery was soon complete and the man now feels quite well. The findings as to vision and hearing have not changed but there is no further headache or dizziness. As is always the case, the whole of the tumor could not be removed and yet all disturbances ceased. There was transient polyuria for a time after the operation.

80. **Low Basal Protein Requirement in Health.**—Hindhede was requested by the editors of the *Ugeskrift* to give an oversight of the work that has been done in recent years toward the solution of the problems of nutrition and minimum dietary needs. After an extensive review of the subject, he describes his own research, saying that scientists until recently have mistaken the vitamin requirement for the albumin requirement. The standard for the minimum basal protein need was thus founded on mistaken premises. By a fortunate chance, his own research from the first was based on foods particularly rich in vitamins. His life for twenty-one years has been practically one continuous laboratory experiment in this respect, he and his family living on an average of 50 gm. of digestible protein per capita as the extreme. The nitrogen output in his urine has kept close to 7 gm. The diet was not vegetarian, but merely was restricted to from 30 to 50 gm. digestible albumin. His children after ten years of this diet measured and weighed up to others two years older; their endurance was almost proverbial. He began by living for three months on potatoes, butter, strawberries and milk, a total of 30 gm. of digestible albumin. In order to determine the minimum need he undertook long series of experiments on himself and two men, his laboratory assistant and a student. These tests were continued for six months at a time. The details are tabulated and compared with similar experiments by Rubner and others.

Among the conclusions from the data tabulated are that the minimum of albumin for 3,000 calories is about 20 gm. of digestible albumin. Also that the albumin in potatoes, bread, milk and meat has essentially the same biologic value. Also that the actual need of the body for albumin yields to the urine only 3 or 4 gm. nitrogen a day. The high figures for the output of nitrogen obtained in the Chittenden, Rubner and other tests, based on the old supposed albumin requirement, reached such high figures because the excess of albumin not needed by the body was thrown off. "This shows," he claims, "how expensive this false theory has been to the world." He declares in conclusion that there is no need to pay attention to the albumin in the diet; this will take care of itself. But there is every need to pay attention to the articles of diet which we know cure beriberi and scurvy: bran, potatoes, carrots, pot herbs, soup, raw fruit and raw milk. A moderate amount of meat may do no harm, but he insists that his years of home and laboratory experiments and tests have amply confirmed the fact that meat is unnecessary. His last word is that he cannot falsify the figures resulting from his years of research even though he knows that he may be called a fanatic. "If any one had told me twenty years ago, or even six years ago, that one could live year after year in the best of well-being on potatoes, margarin and water, I would scarcely have believed him. I would have regarded 40 to 50 gm. of albumin as the minimum instead of the 20 gm. which tests on three adults proved to be the minimum. One of the men had considerable exercise, one a moderate amount, and one did almost exclusively brain work." [Middle instalment of Hindhede article lost in the mails.]